

#4

1801.app
SEQUENCE LISTING

<110> Warner-Lambert

<120> Secreted soluble alpha2 delta-2, alpha2 delta-3, alpha2
delta-4 calcium channel subunit polypeptides and
screening assays using same

<130> 180

<140>

<141>

<160> 28

<170> PatentIn Ver. 2.1

<210> 1

<211> 3186

<212> DNA

<213> Homo sapiens

<400> 1

atggcggtgc cggctcggac ctgcggcgcc tctcggcccc gccagcgcg gactgcgcgc
60ccctggcccc gctgcggccc ccaccctggc ccgggcaccc ggcgccccgac gtccggggccc
120ccgcgccccg tgtggetgct gctgccgctt ctaccgctgc tcgccgcccc cggcgccctct
180gcctacagct tccccagca gcacacgatg cagcactggg ccgggcgtct ggagcaggag
240gtcgacggcg tgatgcggat ttttggaggc gtccagcagc tccgtgagat ttacaaggac
300aaccggaacc tgttcgaggt acaggagaat gagcctcaga agttggtgga gaaggtggca
360ggggacattg agagccttct ggacaggaag gtgcaggccc tgaagagact ggctgatgct
420gcagagaact tccagaaagc acaccgctgg caggacaaca tcaaggagga agacatcgtg
480tactatgacg ccaaggctga cgctgagctg gacgaccctg agagtgagga tgtggaaagg
540gggtctaagg ccagcaccct aaggctggac ttcatcgagg acccaaactt caagaacaag
600gtcaactatt catacgcggc tgtacagatc cctacggaca tctacaaagg ctccactgtc
660atcctcaatg agctcaactg gacagaggcc ctggagaatg tgttcatgga aaaccgcaga
720caagacccca cactgctgtg gcaggtcttc ggcagcgcca caggagtcac tcgctactac
780ccggccaccc cgtggcgagc cccaagaag atcgacctgt acgatgtccg aaggagaccc
840tggtatatcc agggggcctc gtcacccaaa gacatgggtca tcatcgtgga tgtgagtggc
900agtgtgagcg gcctgaccct gaagctgatg aagacatctg tctgcgagat gctggacacg
960

1801.app

ctgtctgatg atgactatgt gaatgtggcc tcgttcaacg agaaggcaca gcctgtgtca
 1020
 tgcttcacac acctggtgca ggccaatgtg cgcaacaaga aggtgttcaa ggaagctgtg
 1080
 cagggcatgg tggccaaggg caccacaggc tacaaggccg gctttgagta tgcctttgac
 1140
 cagctgcaga actccaacat cactcgggcc aactgcaaca agatgatcat gatgttcacg
 1200
 gatggtggtg aggaccgcgt gcaggacgtc tttgagaagt acaattggcc aaaccggacg
 1260
 gtgcgcgtgt ttactttctc cgtgggggcag cataactatg acgtcacacc gctgcagtgg
 1320
 atggcctgtg ccaacaaagg ctactatttt gagatccctt ccatcggagc catccgcac
 1380
 aacacacagg aatatctaga tgtgttgggc aggcccatgg tgctggcagg caaggaggcc
 1440
 aagcaggttc agtggaccaa cgtgtatgag gatgcactgg gactgggggtt ggtggtaaca
 1500
 gggaccctcc ctgttttcaa cctgacacag gatggccctg gggaaaagaa gaaccagctg
 1560
 atcctgggcg tgatgggcat tgacgtggct ctgaatgaca tcaagaggct gacccccaac
 1620
 tacacgcttg gagccaacgg ctatgtgttt gccattgacc tgaacggcta cgtgttgctg
 1680
 caccccaatc tcaagcccca gaccaccaac ttccgggagc ctgtgactct ggacttctg
 1740
 gatgcggagc tagaggatga gaacaaggaa gagatccgtc ggagcatgat tgatggcaac
 1800
 aagggccaca agcagatcag aacgttggtc aagtccttgg atgagaggta catagatgag
 1860
 gtgacacgga actacacctg ggtgcctata aggagcacta actacagcct ggggctggtg
 1920
 ctcccacctt acagcacctt ctacctcaa gccaatctca gtgaccagat cctgcaggtc
 1980
 aagtattttg agttcctgct cccagcagc tttgagtctg aaggacacgt tttcattgct
 2040
 cccagagagt actgcaagga cctgaatgcc tcagacaaca acaccgagtt cctgaaaaac
 2100
 tttattgagc tcatggagaa agtgactcca gactccaagc agtgcaacaa cttccttctg
 2160
 cacaacctga tcttggacac gggcatcacg cagcagctgg tagagcgtgt gtggagggac
 2220
 caggatctca acacgtacag cctactggcc gtgttcgctg ccacagacgg tggcatcacc
 2280
 cgagtcttcc ccaacaaggc agctgaggac tggacagaga accctgagcc cttcaatgcc
 2340
 agcttctacc gccgcagcct ggataaccac ggttatgtct tcaagccccc acaccaggat
 2400
 gccctgttaa ggccgctgga gctggagaat gacactgtgg gcatcctcgt cagcacagct
 2460
 gtggagctca gcctaggcag gcgcacactg aggccagcag tgggtgggcgt caagctggac
 2520
 ctagaggctt gggctgagaa gttcaagggtg ctagccagca accgtaccca ccaagaccag
 2580
 cctcagaagt gcggcccca cagccactgt gagatggact gcgaggttaa caatgaggac
 2640

1801.app

ttactctgtg tcctcattga tgatggagga ttcctggtgc tgtcaaacca gaaccatcag
2700
tgggaccagg tgggcaggtt cttcagttag gtggatgcca acctgatgct ggcactctac
2760
aataactcct tctacacccg caaggagtcc tatgactatc aggcagcctg tgccccctcag
2820
ccccctggca acctgggtgc tgcaccccg ggtgtctttg tgcccaccgt tgcagatttc
2880
cttaacctgg cctgggtggac ctctgctgcc gcctgggtccc tgttccagca gcttctctac
2940
ggcctcatct accacagctg gttccaagca gaccccgagg aggccgaggg gagccccgag
3000
acgcgcgaga gcagctgcgt catgaaacag acccagtact acttcggctc ggtaaaccgc
3060
tcctacaacg ccatcatcga ctgcggaaac tgctccaggc tgttccacgc gcagagactg
3120
accaacacca atcttctctt tgtggtggcc gagaagccgc tgtgcagcca gtgcgaggct
3180
ggccgg
3186

<210> 2

<211> 3248

<212> DNA

<213> Homo sapiens

<400> 2

atggcggtgc cggctcggac ctgcggcgcc tctcggcccc gccagcgcg gactgcgcgc
60
ccctggcccc gctgcggccc ccaccctggc cccggcacc gccgccccgac gtccggggccc
120
ccgcgccccg tgtggctgct gctgccgctt ctaccgctgc tcgcccccc cggcgcctct
180
gcctacagct tccccagca gcacacgatg cagcactggg cccggcgctt ggagcaggag
240
gtcgacggcg tgatgcggat ttttggaggc gtccagcagc tccgtgagat ttacaaggac
300
aaccggaacc tgttcgaggt acaggagaat gagcctcaga agttgggtgga gaagggtggca
360
ggggacattg agagccttct ggacaggaag gtgcaggccc tgaagagact ggctgatgct
420
gcagagaact tccagaaagc acaccgctgg caggacaaca tcaaggagga agacatcgtg
480
tactatgacg ccaaggctga cgctgagctg gacgaccctg agagtgagga tgtggaaagg
540
gggtctaagg ccagcaccct aaggctggac ttcacgagg acccaaactt caagaacaag
600
gtcaactatt catacgcggc tgtacagatc cctacggaca tctacaaagg ctccactgtc
660
atcctcaatg agctcaactg gacagaggcc ctggagaatg tgttcatgga aaaccgcaga
720
caagacccca cactgctgtg gcaggtcttc ggcagcgcca caggagtcac tcgctactac
780
ccggccacc cgtggcgagc cccaagaag atcgacctgt acgatgtccg aaggagaccc
840

1801.app

tggtatatcc aggggggcctc gtcacccaaa gacatgggtca tcatcgtgga tgtgagtggc
900
agtgtgagcg gcctgaccct gaagctgatg aagacatctg tctgcgagat gctggacacg
960
ctgtctgatg atgactatgt gaatgtggcc tcgttcaacg agaaggcaca gcctgtgtca
1020
tgcttcacac acctgggtgca ggccaatgtg cgcaacaaga aggtgttcaa ggaagctgtg
1080
cagggcatgg tggccaaggg caccacaggc tacaaggccg gctttgagta tgcctttgac
1140
cagctgcaga actccaacat cactcggggc aactgcaaca agatgatcat gatgttcacg
1200
gatgggtggg aggaccgcgt gcaggacgtc tttgagaagt acaattggcc aaaccggacg
1260
gtgcgcgtgt ttactttctc cgtggggcag cataactatg acgtcacacc gctgcagtgg
1320
atggcctgtg ccaacaaagg ctactatttt gagatccctt ccatcggagc catccgcatc
1380
aacacacagg aatatctaga tgtgttgggc aggcccatgg tgctggcagg caaggaggcc
1440
aagcaggttc agtggaccaa cgtgtatgag gatgcactgg gactgggggtt ggtggtaaca
1500
gggaccctcc ctgtttttcaa cctgacacag gatggccctg gggaaaagaa gaaccagctg
1560
atcctgggcg tgatgggcat tgacgtggct ctgaatgaca tcaagaggct gacccccaac
1620
tacacgcttg gagccaacgg ctatgtgttt gccattgacc tgaacggcta cgtgttgctg
1680
caccccaatc tcaagcccca gaccaccaac ttccgggagc ctgtgactct ggacttctg
1740
gatgcggagc tagaggatga gaacaaggaa gagatccgtc ggagcatgat tgatggcaac
1800
aagggccaca agcagatcag aacgttggtc aagtccttgg atgagaggta catagatgag
1860
gtgacacgga actacacctg ggtgcctata aggagcacta actacagcct ggggctgggtg
1920
ctcccaccct acagcacctt ctacctcaa gccaatctca gtgaccagat cctgcaggtc
1980
aagtattttg agttcctgct ccccagcagc tttgagtctg aaggacacgt tttcattgct
2040
cccagagagt actgcaagga cctgaatgcc tcagacaaca acaccgagtt cctgaaaaac
2100
tttattgagc tcatggagaa agtgactcca gactccaagc agtgcaacaa cttccttctg
2160
cacaacctga tcttggacac gggcatcacg cagcagctgg tagagcgtgt gtggagggac
2220
caggatctca acacgtacag cctactggcc gtgttcgctg ccacagacgg tggcatcacc
2280
cgagtcttcc ccaacaaggc agctgaggac tggacagaga accctgagcc cttcaatgcc
2340
agcttctacc gccgcagcct ggataaccac ggttatgtct tcaagccccc acaccaggat
2400
gccctgttaa ggccgctgga gctggagaat gacactgtgg gcatcctcgt cagcacagct
2460
gtggagctca gcctaggcag gcgcacactg aggccagcag tgggtgggcgt caagctggac
2520

1801.app

ctagaggctt gggctgagaa gttcaagggtg ctagccagca accgtaccca ccaagaccag
2580
cctcagaagt gcggcccca cagccactgt gagatggact gcgagggttaa caatgaggac
2640
ttactctgtg tcctcattga tgatggagga ttcttgggtgc tgtcaaacca gaaccatcag
2700
tgggaccagg tgggcagggtt cttcagttag gtggatgcca acctgatgct ggcactctac
2760
aataactcct tctacacccg caaggagtcc tatgactatc aggcagcctg tgcccctcag
2820
ccccctggca acctgggtgc tgcaccccgg ggtgtctttg tgcccaccgt tgcagatttc
2880
cttaacctgg cctgggtggac ctctgctgcc gcctgggtccc tggtccagca gcttctctac
2940
ggcctcatct accacagctg gttccaagca gaccccgagg aggcagagg gagccccgag
3000
acgcgcgaga gcagctgcgt catgaaacag acccagtact acttcggctc ggtaaaccgc
3060
tcctacaacg ccatcatcga ctgcggaaac tgctccaggc tggtccacgc gcagagactg
3120
accaacacca atcttctctt tgtggtggcc gagaagccgc tgtgcagcca gtgcgaggct
3180
ggccggctgc tgcagaagga gacgcactgc ccagcggacg gcccgagca gtgtgagcta
3240
gtgcagag
3248

<210> 3
<211> 3327
<212> DNA
<213> Homo sapiens

<400> 3
atggcggtgc cggctcggac ctgcggcgcc tctcggcccc gccagcgcg gactgcgcgc
60
ccctggcccc gctgcggccc ccacctggc cccggcacc gccgccccgac gtccggggccc
120
ccgcgccccg tgtggtctgt gctgcgcctt ctaccgctgc tcgccccccc cggcgcctct
180
gcctacagct tccccagca gcacacgatg cagcactggg cccggcgtct ggagcaggag
240
gtcgacggcg tgatgcggat ttttggaggc gtccagcagc tccgtgagat ttacaaggac
300
aaccggaacc tggtcgaggt acaggagaat gagcctcaga agttgggtgga gaagggtggca
360
ggggacattg agagccttct ggacaggaag gtgcaggccc tgaagagact ggctgatgct
420
gcagagaact tccagaaagc acaccgctgg caggacaaca tcaaggagga agacatcgtg
480
tactatgacg ccaaggctga cgctgagctg gacgaccctg agagtgagga tgtggaaagg
540
gggtctaagg ccagcaccct aaggctggac ttcacgagg acccaaactt caagaacaag
600
gtcaactatt catacgcggc tgtacagatc cctacggaca tctacaaagg ctccactgtc
660

1801.app

atcctcaatg agctcaactg gacagaggcc ctggagaatg tgttcatgga aaaccgcaga
 720
 caagacccca cactgctgtg gcaggtcttc ggcagcgcca caggagtcac tcgctactac
 780
 ccggccaccc cgtggcgagc cccaagaag atcgacctgt acgatgtccg aaggagaccc
 840
 tggatatatcc agggggcctc gtcacccaaa gacatgggtca tcatcgtgga tgtgagtggc
 900
 agtgtgagcg gcctgaccct gaagctgatg aagacatctg tctgcgagat gctggacacg
 960
 ctgtctgatg atgactatgt gaatgtggcc tcgttcaacg agaaggcaca gcctgtgtca
 1020
 tgcttcacac acctgggtgca ggccaatgtg cgcaacaaga aggtgttcaa ggaagctgtg
 1080
 cagggcatgg tggccaaggg caccacaggc tacaaggccg gctttgagta tgcctttgac
 1140
 cagctgcaga actccaacat cactcgggcc aactgcaaca agatgatcat gatgttcacg
 1200
 gatgggtggg aggaccgcgt gcaggacgtc tttgagaagt acaattggcc aaaccggacg
 1260
 gtgcgcgtgt ttactttctc cgtggggcag cataactatg acgtcacacc gctgcagtgg
 1320
 atggcctgtg ccaacaaagg ctactatttt gagatccctt ccatcggagc catccgcac
 1380
 aacacacagg aatatctaga tgtgttgggc aggcccatgg tgctggcagg caaggaggcc
 1440
 aagcagggttc agtggaccaa cgtgtatgag gatgcactgg gactgggggtt ggtggtaaca
 1500
 gggaccctcc ctgttttcaa cctgacacag gatggccctg gggaaaagaa gaaccagctg
 1560
 atcctgggcg tgatgggcat tgacgtggct ctgaatgaca tcaagaggct gacccccaac
 1620
 tacacgcttg gagccaacgg ctatgtgttt gccattgacc tgaacggcta cgtgttgctg
 1680
 caccccaatc tcaagcccca gaccaccaac ttccgggagc ctgtgactct ggacttcctg
 1740
 gatgcggagc tagaggatga gaacaaggaa gagatccgtc ggagcatgat tgatggcaac
 1800
 aagggccaca agcagatcag aacgttggtc aagtccttgg atgagaggta catagatgag
 1860
 gtgacacgga actacacctg ggtgcctata aggagcacta actacagcct ggggctgggtg
 1920
 ctcccaccct acagcacctt ctacctcaa gccaatctca gtgaccagat cctgcaggtc
 1980
 aagtattttg agttcctgct ccccgagcgc tttgagtctg aaggacacgt tttcattgct
 2040
 cccagagagt actgcaagga cctgaatgcc tcagacaaca acaccgagtt cctgaaaaac
 2100
 tttattgagc tcatggagaa agtgactcca gactccaagc agtgcaacaa cttccttctg
 2160
 cacaacctga tcttggacac gggcatcacg cagcagctgg tagagcgtgt gtggagggac
 2220
 caggatctca acacgtacag cctactggcc gtgttcgctg ccacagacgg tggcatcacc
 2280
 cgagtcttcc ccaacaaggc agctgaggac tggacagaga accctgagcc cttcaatgcc
 2340

1801.app

agcttctacc gccgcagcct ggataaccac ggttatgtct tcaagcccc acaccaggat
 2400
 gccctgttaa ggccgctgga gctggagaat gacactgtgg gcatcctcgt cagcacagct
 2460
 gtggagctca gcctaggcag gcgcacactg aggccagcag tgggtgggcgt caagctggac
 2520
 ctagaggctt gggctgagaa gttcaagggtg ctagccagca accgtacca ccaagaccag
 2580
 cctcagaagt gcggccccaa cagccactgt gagatggact gcgagggttaa caatgaggac
 2640
 ttactctgtg tcctcattga tgatggagga ttccctgggtgc tgtcaaacca gaaccatcag
 2700
 tgggaccagg tgggcagggtt cttcagttag gtggatgcc aacctgatgct ggcactctac
 2760
 aataactcct tctacacccg caaggagtcc tatgactatc aggcagcctg tgcccctcag
 2820
 ccccctggca acctgggtgc tgcaccccgg ggtgtctttg tgcccaccgt tgcagatttc
 2880
 cttaacctgg cctgggtggac ctctgctgcc gcctgggtccc tgttccagca gcttctctac
 2940
 ggccatcatc accacagctg gttccaagca gaccccgagg aggccgaggg gagccccgag
 3000
 acgcgcgaga gcagctgcgt catgaaacag acccagtact acttcggctc ggtaaacgcc
 3060
 tcctacaacg ccatcatcga ctgcggaaac tgctccaggc tgttccacgc gcagagactg
 3120
 accaacacca atcttctctt tgtgggtggcc gagaagccgc tgtgcagcca gtgcgaggct
 3180
 ggccggctgc tgcagaagga gacgcactgc ccagcggacg gcccgagca gtgtgagcta
 3240
 gtgcagagac cgcgataccg gagaggcccc cacatctgct tcgactacaa cgcgacagaa
 3300
 gatacctcag actgtggccg cgggggcc
 3327

<210> 4

<211> 1062

<212> PRT

<213> Homo sapiens

<400> 4

Met	Ala	Val	Pro	Ala	Arg	Thr	Cys	Gly	Ala	Ser	Arg	Pro	Gly	Pro	Ala
1				5					10					15	

Arg	Thr	Ala	Arg	Pro	Trp	Pro	Gly	Cys	Gly	Pro	His	Pro	Gly	Pro	Gly
			20					25					30		

Thr	Arg	Arg	Pro	Thr	Ser	Gly	Pro	Pro	Arg	Pro	Leu	Trp	Leu	Leu	Leu
		35					40					45			

Pro	Leu	Leu	Pro	Leu	Leu	Ala	Ala	Pro	Gly	Ala	Ser	Ala	Tyr	Ser	Phe
	50					55					60				

Pro	Gln	Gln	His	Thr	Met	Gln	His	Trp	Ala	Arg	Arg	Leu	Glu	Gln	Glu
65					70					75				80	

1801.app

Val	Asp	Gly	Val	Met 85	Arg	Ile	Phe	Gly	Gly 90	Val	Gln	Gln	Leu	Arg 95	Glu	
Ile	Tyr	Lys	Asp 100	Asn	Arg	Asn	Leu	Phe 105	Glu	Val	Gln	Glu	Asn 110	Glu	Pro	
Gln	Lys	Leu 115	Val	Glu	Lys	Val	Ala 120	Gly	Asp	Ile	Glu	Ser 125	Leu	Leu	Asp	
Arg	Lys 130	Val	Gln	Ala	Leu	Lys 135	Arg	Leu	Ala	Asp	Ala 140	Ala	Glu	Asn	Phe	
Gln 145	Lys	Ala	His	Arg	Trp 150	Gln	Asp	Asn	Ile	Lys 155	Glu	Glu	Asp	Ile	Val 160	
Tyr	Tyr	Asp	Ala	Lys 165	Ala	Asp	Ala	Glu	Leu 170	Asp	Asp	Pro	Glu	Ser 175	Glu	
Asp	Val	Glu	Arg 180	Gly	Ser	Lys	Ala	Ser 185	Thr	Leu	Arg	Leu	Asp 190	Phe	Ile	
Glu	Asp	Pro 195	Asn	Phe	Lys	Asn	Lys 200	Val	Asn	Tyr	Ser	Tyr 205	Ala	Ala	Val	
Gln	Ile 210	Pro	Thr	Asp	Ile	Tyr 215	Lys	Gly	Ser	Thr	Val 220	Ile	Leu	Asn	Glu	
Leu 225	Asn	Trp	Thr	Glu	Ala 230	Leu	Glu	Asn	Val	Phe 235	Met	Glu	Asn	Arg	Arg 240	
Gln	Asp	Pro	Thr	Leu 245	Leu	Trp	Gln	Val	Phe 250	Gly	Ser	Ala	Thr	Gly 255	Val	
Thr	Arg	Tyr	Tyr 260	Pro	Ala	Thr	Pro	Trp 265	Arg	Ala	Pro	Lys	Lys 270	Ile	Asp	
Leu	Tyr	Asp 275	Val	Arg	Arg	Arg	Pro 280	Trp	Tyr	Ile	Gln	Gly 285	Ala	Ser	Ser	
Pro	Lys 290	Asp	Met	Val	Ile	Ile 295	Val	Asp	Val	Ser	Gly 300	Ser	Val	Ser	Gly	
Leu 305	Thr	Leu	Lys	Leu	Met 310	Lys	Thr	Ser	Val	Cys 315	Glu	Met	Leu	Asp	Thr 320	
Leu	Ser	Asp	Asp	Asp 325	Tyr	Val	Asn	Val	Ala 330	Ser	Phe	Asn	Glu	Lys 335	Ala	
Gln	Pro	Val	Ser 340	Cys	Phe	Thr	His	Leu 345	Val	Gln	Ala	Asn	Val 350	Arg	Asn	
Lys	Lys	Val 355	Phe	Lys	Glu	Ala	Val 360	Gln	Gly	Met	Val	Ala 365	Lys	Gly	Thr	
Thr	Gly	Tyr	Lys	Ala	Gly	Phe	Glu	Tyr	Ala	Phe	Asp	Gln	Leu	Gln	Asn	

1801.app

370					375					380					
Ser 385	Asn	Ile	Thr	Arg	Ala 390	Asn	Cys	Asn	Lys	Met 395	Ile	Met	Met	Phe	Thr 400
Asp	Gly	Gly	Glu	Asp 405	Arg	Val	Gln	Asp	Val 410	Phe	Glu	Lys	Tyr	Asn 415	Trp
Pro	Asn	Arg	Thr 420	Val	Arg	Val	Phe	Thr 425	Phe	Ser	Val	Gly	Gln 430	His	Asn
Tyr	Asp	Val 435	Thr	Pro	Leu	Gln	Trp 440	Met	Ala	Cys	Ala	Asn 445	Lys	Gly	Tyr
Tyr	Phe 450	Glu	Ile	Pro	Ser	Ile 455	Gly	Ala	Ile	Arg	Ile 460	Asn	Thr	Gln	Glu
Tyr 465	Leu	Asp	Val	Leu	Gly 470	Arg	Pro	Met	Val	Leu 475	Ala	Gly	Lys	Glu	Ala 480
Lys	Gln	Val	Gln	Trp 485	Thr	Asn	Val	Tyr	Glu 490	Asp	Ala	Leu	Gly	Leu 495	Gly
Leu	Val	Val	Thr 500	Gly	Thr	Leu	Pro	Val 505	Phe	Asn	Leu	Thr	Gln 510	Asp	Gly
Pro	Gly	Glu 515	Lys	Lys	Asn	Gln	Leu 520	Ile	Leu	Gly	Val	Met 525	Gly	Ile	Asp
Val	Ala 530	Leu	Asn	Asp	Ile	Lys 535	Arg	Leu	Thr	Pro	Asn 540	Tyr	Thr	Leu	Gly
Ala 545	Asn	Gly	Tyr	Val	Phe 550	Ala	Ile	Asp	Leu	Asn 555	Gly	Tyr	Val	Leu	Leu 560
His	Pro	Asn	Leu	Lys 565	Pro	Gln	Thr	Thr 570	Asn	Phe	Arg	Glu	Pro	Val 575	Thr
Leu	Asp	Phe	Leu 580	Asp	Ala	Glu	Leu	Glu 585	Asp	Glu	Asn	Lys	Glu 590	Glu	Ile
Arg	Arg	Ser 595	Met	Ile	Asp	Gly	Asn 600	Lys	Gly	His	Lys	Gln 605	Ile	Arg	Thr
Leu 610	Val	Lys	Ser	Leu	Asp	Glu 615	Arg	Tyr	Ile	Asp	Glu 620	Val	Thr	Arg	Asn
Tyr 625	Thr	Trp	Val	Pro	Ile 630	Arg	Ser	Thr	Asn	Tyr 635	Ser	Leu	Gly	Leu	Val 640
Leu	Pro	Pro	Tyr	Ser 645	Thr	Phe	Tyr	Leu	Gln 650	Ala	Asn	Leu	Ser	Asp 655	Gln
Ile	Leu	Gln	Val 660	Lys	Tyr	Phe	Glu	Phe 665	Leu	Leu	Pro	Ser	Ser 670	Phe	Glu

1801.app

Ser	Glu	Gly	His	Val	Phe	Ile	Ala	Pro	Arg	Glu	Tyr	Cys	Lys	Asp	Leu
		675					680					685			
Asn	Ala	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Lys	Asn	Phe	Ile	Glu	Leu
	690					695					700				
Met	Glu	Lys	Val	Thr	Pro	Asp	Ser	Lys	Gln	Cys	Asn	Asn	Phe	Leu	Leu
705					710					715					720
His	Asn	Leu	Ile	Leu	Asp	Thr	Gly	Ile	Thr	Gln	Gln	Leu	Val	Glu	Arg
				725					730					735	
Val	Trp	Arg	Asp	Gln	Asp	Leu	Asn	Thr	Tyr	Ser	Leu	Leu	Ala	Val	Phe
			740					745					750		
Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	
Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn
	930					935					940				
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960
Leu	Asn	Leu	Ala	Trp	Trp	Thr	Ser	Ala	Ala	Ala	Trp	Ser	Leu	Phe	Gln
				965					970					975	

1801.app

Gln Leu Leu Tyr Gly Leu Ile Tyr His Ser Trp Phe Gln Ala Asp Pro
 980 985 990
 Ala Glu Ala Glu Gly Ser Pro Glu Thr Arg Glu Ser Ser Cys Val Met
 995 1000 1005
 Lys Gln Thr Gln Tyr Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala
 1010 1015 1020
 Ile Ile Asp Cys Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu
 1025 1030 1035 1040
 Thr Asn Thr Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser
 1045 1050 1055
 Gln Cys Glu Ala Gly Arg
 1060

<210> 5
 <211> 1082
 <212> PRT
 <213> Homo sapiens

<400> 5

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Arg Pro Gly Pro Ala
 1 5 10 15
 Arg Thr Ala Arg Pro Trp Pro Gly Cys Gly Pro His Pro Gly Pro Gly
 20 25 30
 Thr Arg Arg Pro Thr Ser Gly Pro Pro Arg Pro Leu Trp Leu Leu Leu
 35 40 45
 Pro Leu Leu Pro Leu Leu Ala Ala Pro Gly Ala Ser Ala Tyr Ser Phe
 50 55 60
 Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu Glu Gln Glu
 65 70 75 80
 Val Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln Leu Arg Glu
 85 90 95
 Ile Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu Asn Glu Pro
 100 105 110
 Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser Leu Leu Asp
 115 120 125
 Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala Glu Asn Phe
 130 135 140
 Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu Asp Ile Val
 145 150 155 160

1801.app

Tyr	Tyr	Asp	Ala	Lys 165	Ala	Asp	Ala	Glu	Leu 170	Asp	Asp	Pro	Glu	Ser 175	Glu
Asp	Val	Glu	Arg 180	Gly	Ser	Lys	Ala	Ser 185	Thr	Leu	Arg	Leu	Asp 190	Phe	Ile
Glu	Asp	Pro 195	Asn	Phe	Lys	Asn	Lys 200	Val	Asn	Tyr	Ser	Tyr 205	Ala	Ala	Val
Gln	Ile 210	Pro	Thr	Asp	Ile	Tyr 215	Lys	Gly	Ser	Thr	Val 220	Ile	Leu	Asn	Glu
Leu 225	Asn	Trp	Thr	Glu	Ala 230	Leu	Glu	Asn	Val	Phe 235	Met	Glu	Asn	Arg	Arg 240
Gln	Asp	Pro	Thr	Leu 245	Leu	Trp	Gln	Val	Phe 250	Gly	Ser	Ala	Thr	Gly 255	Val
Thr	Arg	Tyr	Tyr 260	Pro	Ala	Thr	Pro	Trp 265	Arg	Ala	Pro	Lys	Lys 270	Ile	Asp
Leu	Tyr	Asp 275	Val	Arg	Arg	Arg	Pro 280	Trp	Tyr	Ile	Gln	Gly 285	Ala	Ser	Ser
Pro	Lys 290	Asp	Met	Val	Ile	Ile 295	Val	Asp	Val	Ser	Gly 300	Ser	Val	Ser	Gly
Leu 305	Thr	Leu	Lys	Leu	Met 310	Lys	Thr	Ser	Val	Cys 315	Glu	Met	Leu	Asp	Thr 320
Leu	Ser	Asp	Asp	Asp 325	Tyr	Val	Asn	Val	Ala 330	Ser	Phe	Asn	Glu	Lys 335	Ala
Gln	Pro	Val	Ser 340	Cys	Phe	Thr	His	Leu 345	Val	Gln	Ala	Asn	Val 350	Arg	Asn
Lys	Lys	Val 355	Phe	Lys	Glu	Ala	Val 360	Gln	Gly	Met	Val	Ala 365	Lys	Gly	Thr
Thr	Gly 370	Tyr	Lys	Ala	Gly	Phe 375	Glu	Tyr	Ala	Phe	Asp 380	Gln	Leu	Gln	Asn
Ser 385	Asn	Ile	Thr	Arg	Ala 390	Asn	Cys	Asn	Lys	Met 395	Ile	Met	Met	Phe	Thr 400
Asp	Gly	Gly	Glu	Asp 405	Arg	Val	Gln	Asp	Val 410	Phe	Glu	Lys	Tyr	Asn 415	Trp
Pro	Asn	Arg	Thr 420	Val	Arg	Val	Phe	Thr 425	Phe	Ser	Val	Gly	Gln 430	His	Asn
Tyr	Asp	Val 435	Thr	Pro	Leu	Gln	Trp 440	Met	Ala	Cys	Ala	Asn 445	Lys	Gly	Tyr
Tyr	Phe	Glu	Ile	Pro	Ser	Ile	Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu

1801.app

450					455					460					
Tyr 465	Leu	Asp	Val	Leu	Gly 470	Arg	Pro	Met	Val	Leu 475	Ala	Gly	Lys	Glu	Ala 480
Lys	Gln	Val	Gln	Trp 485	Thr	Asn	Val	Tyr	Glu 490	Asp	Ala	Leu	Gly	Leu 495	Gly
Leu	Val	Val	Thr 500	Gly	Thr	Leu	Pro	Val 505	Phe	Asn	Leu	Thr	Gln 510	Asp	Gly
Pro	Gly	Glu 515	Lys	Lys	Asn	Gln	Leu 520	Ile	Leu	Gly	Val	Met 525	Gly	Ile	Asp
Val	Ala 530	Leu	Asn	Asp	Ile	Lys 535	Arg	Leu	Thr	Pro	Asn 540	Tyr	Thr	Leu	Gly
Ala 545	Asn	Gly	Tyr	Val	Phe 550	Ala	Ile	Asp	Leu	Asn 555	Gly	Tyr	Val	Leu	Leu 560
His	Pro	Asn	Leu	Lys 565	Pro	Gln	Thr	Thr	Asn 570	Phe	Arg	Glu	Pro	Val 575	Thr
Leu	Asp	Phe	Leu 580	Asp	Ala	Glu	Leu	Glu 585	Asp	Glu	Asn	Lys	Glu 590	Glu	Ile
Arg	Arg	Ser 595	Met	Ile	Asp	Gly	Asn 600	Lys	Gly	His	Lys	Gln 605	Ile	Arg	Thr
Leu	Val 610	Lys	Ser	Leu	Asp	Glu 615	Arg	Tyr	Ile	Asp	Glu 620	Val	Thr	Arg	Asn
Tyr 625	Thr	Trp	Val	Pro	Ile 630	Arg	Ser	Thr	Asn	Tyr 635	Ser	Leu	Gly	Leu	Val 640
Leu	Pro	Pro	Tyr	Ser 645	Thr	Phe	Tyr	Leu	Gln 650	Ala	Asn	Leu	Ser	Asp 655	Gln
Ile	Leu	Gln	Val 660	Lys	Tyr	Phe	Glu	Phe 665	Leu	Leu	Pro	Ser	Ser 670	Phe	Glu
Ser	Glu	Gly 675	His	Val	Phe	Ile	Ala 680	Pro	Arg	Glu	Tyr	Cys 685	Lys	Asp	Leu
Asn 690	Ala	Ser	Asp	Asn	Asn	Thr 695	Glu	Phe	Leu	Lys	Asn 700	Phe	Ile	Glu	Leu
Met 705	Glu	Lys	Val	Thr	Pro 710	Asp	Ser	Lys	Gln	Cys 715	Asn	Asn	Phe	Leu	Leu 720
His	Asn	Leu	Ile	Leu 725	Asp	Thr	Gly	Ile	Thr 730	Gln	Gln	Leu	Val	Glu 735	Arg
Val	Trp	Arg	Asp 740	Gln	Asp	Leu	Asn	Thr 745	Tyr	Ser	Leu	Leu	Ala 750	Val	Phe

1801.app

Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	
Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn
	930					935					940				
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960
Leu	Asn	Leu	Ala	Trp	Trp	Thr	Ser	Ala	Ala	Ala	Trp	Ser	Leu	Phe	Gln
				965					970					975	
Gln	Leu	Leu	Tyr	Gly	Leu	Ile	Tyr	His	Ser	Trp	Phe	Gln	Ala	Asp	Pro
			980					985					990		
Ala	Glu	Ala	Glu	Gly	Ser	Pro	Glu	Thr	Arg	Glu	Ser	Ser	Cys	Val	Met
		995					1000					1005			
Lys	Gln	Thr	Gln	Tyr	Tyr	Phe	Gly	Ser	Val	Asn	Ala	Ser	Tyr	Asn	Ala
	1010					1015					1020				
Ile	Ile	Asp	Cys	Gly	Asn	Cys	Ser	Arg	Leu	Phe	His	Ala	Gln	Arg	Leu
1025					1030					1035					1040
Thr	Asn	Thr	Asn	Leu	Leu	Phe	Val	Val	Ala	Glu	Lys	Pro	Leu	Cys	Ser
				1045					1050					1055	

1801.app

Gln Cys Glu Ala Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro Ala
 1060 1065 1070

Asp Gly Pro Glu Gln Cys Glu Leu Val Gln
 1075 1080

<210> 6
 <211> 1109
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Arg Pro Gly Pro Ala
 1 5 10 15

Arg Thr Ala Arg Pro Trp Pro Gly Cys Gly Pro His Pro Gly Pro Gly
 20 25 30

Thr Arg Arg Pro Thr Ser Gly Pro Pro Arg Pro Leu Trp Leu Leu Leu
 35 40 45

Pro Leu Leu Pro Leu Leu Ala Ala Pro Gly Ala Ser Ala Tyr Ser Phe
 50 55 60

Pro Gln Gln His Thr Met Gln His Trp Ala Arg Arg Leu Glu Gln Glu
 65 70 75 80

Val Asp Gly Val Met Arg Ile Phe Gly Gly Val Gln Gln Leu Arg Glu
 85 90 95

Ile Tyr Lys Asp Asn Arg Asn Leu Phe Glu Val Gln Glu Asn Glu Pro
 100 105 110

Gln Lys Leu Val Glu Lys Val Ala Gly Asp Ile Glu Ser Leu Leu Asp
 115 120 125

Arg Lys Val Gln Ala Leu Lys Arg Leu Ala Asp Ala Ala Glu Asn Phe
 130 135 140

Gln Lys Ala His Arg Trp Gln Asp Asn Ile Lys Glu Glu Asp Ile Val
 145 150 155 160

Tyr Tyr Asp Ala Lys Ala Asp Ala Glu Leu Asp Asp Pro Glu Ser Glu
 165 170 175

Asp Val Glu Arg Gly Ser Lys Ala Ser Thr Leu Arg Leu Asp Phe Ile
 180 185 190

Glu Asp Pro Asn Phe Lys Asn Lys Val Asn Tyr Ser Tyr Ala Ala Val
 195 200 205

Gln Ile Pro Thr Asp Ile Tyr Lys Gly Ser Thr Val Ile Leu Asn Glu
 210 215 220

1801.app

Leu 225	Asn	Trp	Thr	Glu	Ala 230	Leu	Glu	Asn	Val	Phe 235	Met	Glu	Asn	Arg	Arg 240
Gln	Asp	Pro	Thr	Leu 245	Leu	Trp	Gln	Val	Phe 250	Gly	Ser	Ala	Thr	Gly 255	Val
Thr	Arg	Tyr	Tyr 260	Pro	Ala	Thr	Pro	Trp 265	Arg	Ala	Pro	Lys	Lys 270	Ile	Asp
Leu	Tyr	Asp 275	Val	Arg	Arg	Arg	Pro 280	Trp	Tyr	Ile	Gln	Gly 285	Ala	Ser	Ser
Pro	Lys 290	Asp	Met	Val	Ile	Ile 295	Val	Asp	Val	Ser	Gly 300	Ser	Val	Ser	Gly
Leu 305	Thr	Leu	Lys	Leu	Met 310	Lys	Thr	Ser	Val	Cys 315	Glu	Met	Leu	Asp	Thr 320
Leu	Ser	Asp	Asp	Asp 325	Tyr	Val	Asn	Val	Ala 330	Ser	Phe	Asn	Glu	Lys 335	Ala
Gln	Pro	Val	Ser 340	Cys	Phe	Thr	His 345	Leu	Val	Gln	Ala	Asn	Val 350	Arg	Asn
Lys	Lys	Val 355	Phe	Lys	Glu	Ala	Val 360	Gln	Gly	Met	Val	Ala 365	Lys	Gly	Thr
Thr	Gly 370	Tyr	Lys	Ala	Gly	Phe 375	Glu	Tyr	Ala	Phe	Asp 380	Gln	Leu	Gln	Asn
Ser 385	Asn	Ile	Thr	Arg	Ala 390	Asn	Cys	Asn	Lys	Met 395	Ile	Met	Met	Phe	Thr 400
Asp	Gly	Gly	Glu	Asp 405	Arg	Val	Gln	Asp	Val 410	Phe	Glu	Lys	Tyr	Asn 415	Trp
Pro	Asn	Arg	Thr 420	Val	Arg	Val	Phe	Thr 425	Phe	Ser	Val	Gly	Gln 430	His	Asn
Tyr	Asp	Val 435	Thr	Pro	Leu	Gln	Trp 440	Met	Ala	Cys	Ala	Asn 445	Lys	Gly	Tyr
Tyr	Phe 450	Glu	Ile	Pro	Ser	Ile 455	Gly	Ala	Ile	Arg	Ile 460	Asn	Thr	Gln	Glu
Tyr 465	Leu	Asp	Val	Leu	Gly 470	Arg	Pro	Met	Val	Leu 475	Ala	Gly	Lys	Glu	Ala 480
Lys	Gln	Val	Gln	Trp 485	Thr	Asn	Val	Tyr	Glu 490	Asp	Ala	Leu	Gly	Leu 495	Gly
Leu	Val	Val	Thr 500	Gly	Thr	Leu	Pro	Val 505	Phe	Asn	Leu	Thr	Gln 510	Asp	Gly
Pro	Gly	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Ile	Asp

1801.app															
515						520						525			
Val	Ala	Leu	Asn	Asp	Ile	Lys	Arg	Leu	Thr	Pro	Asn	Tyr	Thr	Leu	Gly
	530					535					540				
Ala	Asn	Gly	Tyr	Val	Phe	Ala	Ile	Asp	Leu	Asn	Gly	Tyr	Val	Leu	Leu
545					550					555					560
His	Pro	Asn	Leu	Lys	Pro	Gln	Thr	Thr	Asn	Phe	Arg	Glu	Pro	Val	Thr
				565					570					575	
Leu	Asp	Phe	Leu	Asp	Ala	Glu	Leu	Glu	Asp	Glu	Asn	Lys	Glu	Glu	Ile
			580					585					590		
Arg	Arg	Ser	Met	Ile	Asp	Gly	Asn	Lys	Gly	His	Lys	Gln	Ile	Arg	Thr
		595					600					605			
Leu	Val	Lys	Ser	Leu	Asp	Glu	Arg	Tyr	Ile	Asp	Glu	Val	Thr	Arg	Asn
	610					615					620				
Tyr	Thr	Trp	Val	Pro	Ile	Arg	Ser	Thr	Asn	Tyr	Ser	Leu	Gly	Leu	Val
625					630					635					640
Leu	Pro	Pro	Tyr	Ser	Thr	Phe	Tyr	Leu	Gln	Ala	Asn	Leu	Ser	Asp	Gln
				645					650					655	
Ile	Leu	Gln	Val	Lys	Tyr	Phe	Glu	Phe	Leu	Leu	Pro	Ser	Ser	Phe	Glu
			660					665					670		
Ser	Glu	Gly	His	Val	Phe	Ile	Ala	Pro	Arg	Glu	Tyr	Cys	Lys	Asp	Leu
		675					680					685			
Asn	Ala	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Lys	Asn	Phe	Ile	Glu	Leu
	690					695					700				
Met	Glu	Lys	Val	Thr	Pro	Asp	Ser	Lys	Gln	Cys	Asn	Asn	Phe	Leu	Leu
705					710					715					720
His	Asn	Leu	Ile	Leu	Asp	Thr	Gly	Ile	Thr	Gln	Gln	Leu	Val	Glu	Arg
				725					730					735	
Val	Trp	Arg	Asp	Gln	Asp	Leu	Asn	Thr	Tyr	Ser	Leu	Leu	Ala	Val	Phe
			740					745					750		
Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	

1801.app

Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn
	930					935					940				
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960
Leu	Asn	Leu	Ala	Trp	Trp	Thr	Ser	Ala	Ala	Ala	Trp	Ser	Leu	Phe	Gln
				965					970					975	
Gln	Leu	Leu	Tyr	Gly	Leu	Ile	Tyr	His	Ser	Trp	Phe	Gln	Ala	Asp	Pro
			980					985					990		
Ala	Glu	Ala	Glu	Gly	Ser	Pro	Glu	Thr	Arg	Glu	Ser	Ser	Cys	Val	Met
		995					1000					1005			
Lys	Gln	Thr	Gln	Tyr	Tyr	Phe	Gly	Ser	Val	Asn	Ala	Ser	Tyr	Asn	Ala
	1010					1015					1020				
Ile	Ile	Asp	Cys	Gly	Asn	Cys	Ser	Arg	Leu	Phe	His	Ala	Gln	Arg	Leu
1025					1030					1035					1040
Thr	Asn	Thr	Asn	Leu	Leu	Phe	Val	Val	Ala	Glu	Lys	Pro	Leu	Cys	Ser
				1045					1050					1055	
Gln	Cys	Glu	Ala	Gly	Arg	Leu	Leu	Gln	Lys	Glu	Thr	His	Cys	Pro	Ala
			1060					1065					1070		
Asp	Gly	Pro	Glu	Gln	Cys	Glu	Leu	Val	Gln	Arg	Pro	Arg	Tyr	Arg	Arg
	1075						1080					1085			
Gly	Pro	His	Ile	Cys	Phe	Asp	Tyr	Asn	Ala	Thr	Glu	Asp	Thr	Ser	Asp
	1090					1095					1100				
Cys	Gly	Arg	Gly	Ala											
1105															

<210> 7
 <211> 3057
 <212> DNA
 <213> Homo sapiens

<400> 7
 atggccgggc cgggctcgcc gcgccgcgcg tcccgggggg cctcggcgct tctcgctgcc
 60
 gcgcttctct acgccgcgct gggggacgtg gtgcgctcgg agcagcagat accgctctcc
 120
 gtggtgaagc tctgggcctc ggcttttggg ggggagataa aatccattgc tgctaagtac
 180
 tccggttccc agcttctgca aaagaaatac aaagagtatg agaaagacgt tgccatagaa
 240
 gaaattgatg gcctccaact ggtaaagaag ctggcaaaga acatggaaga gatgtttcac
 300
 aagaagtctg aggccgtcag gcgtctgggtg gaggctgcag aagaagcaca cctgaaacat
 360
 gaatttgatg cagacttaca gtatgaatac ttcaatgctg tgctgataaa tgaaagggac
 420
 aaagacggga atttttttgga gctgggaaag gaattcatct tagcccca aa tgaccatttt
 480
 aataatttgc ctgtgaacat cagtctaagt gacgtccaag taccaacgaa catgtacaac
 540
 aaagaccctg caattgtcaa tgggggtttat tgggtctgaat ctctaaacaa agttttttgta
 600
 gataactttg accgtgaccc atctctcata tggcagtact ttggaagtgc aaagggcctt
 660
 tttaggcagt atccggggat taaatgggaa ccagatgaga atggagtcac tgccttcgac
 720
 tgcaggaacc gaaaatggta catccaggca gcaacttctc cgaaagacgt ggtcatttta
 780
 gttgacgtca gtggcagcat gaaaggactc cgtctgacta tcgcgaagca aacagtctca
 840
 tccatttttg atacacttgg ggatgatgac ttcttcaaca taattgctta taatgaggag
 900
 cttcactatg tggaaccttg cctgaatgga actttgggtgc aagccgacag gacaaacaaa
 960
 gagcacttca gggagcatct ggacaaactt ttcgccaaag gaattggaat gttggatata
 1020
 gctctgaatg aggccttcaa cattctgagt gatttcaacc acacgggaca aggaagtatc
 1080
 tgcagtcagg ccatcatgct cataactgat ggggcggtgg acacctatga tacaatcttt
 1140
 gcaaaataca attggccaga tcgaaagggt cgcatcttca catacctcat tggacgagag
 1200
 gctgcgtttg cagacaatct aaagtggatg gcctgtgcca acaaaggatt ttttaccag
 1260
 atctccacct tggctgatgt gcaggagaat gtcattggaat accttcacgt gcttagccgg
 1320
 cccaaagtca tcgaccagga gcatgatgtg gtgtggaccg aagcttacat tgacagcact
 1380
 ctgactgatg atcagggccc cgtcctgatg accactgtag ccatgcctgt gtttagtaag

1440
 cagaacgaaa ccagatcgaa gggcattctt ctgggagtgg ttggcacaga tgtcccagtg
 1500
 aaagaacttc tgaagaccat ccccaaatac aagttaggga ttcacgggta tgcctttgca
 1560
 atcacaaata atgggtatat cctgacgcat ccggaactca ggctgctgta cgaagaagga
 1620
 aaaaagcgaa ggaaacctaa ctatagtagc gttgacctct ctgagggtgga gtgggaagac
 1680
 cgagatgacg tggtgagaaa tgctatgggtg aatcgaaaga cggggaagtt ttccatggag
 1740
 gtgaagaaga cagtggacaa agggaaacgg gttttgggtga tgacaaatga ctactattat
 1800
 acagacatca aggggtactcc tttcagttta ggtgtggcgc tttccagagg tcatgggaaa
 1860
 tatttcttcc gagggaatgt aaccatcgaa gaaggcctgc atgacttaga acatcccgat
 1920
 gtgtccttgg cagatgaatg gtcctactgc aacactgacc tacaccctga gcaccgccat
 1980
 ctgtctcagt tagaagcgat taagctctac ctaaaaggca aagaacctct gctccagtg
 2040
 gataaagaat tgatccaaga agtccttttt gacgcggtgg tgagtgcgcc cattgaagcg
 2100
 tattggacca gcctggccct caacaaatct gaaaattctg acaagggcgt ggagggtgcc
 2160
 ttcctcggca ctcgcacggg cctctccaga atcaacctgt ttgtcggggc tgagcagctc
 2220
 accaatcagg acttcctgaa agctggcgac aaggagaaca tttttaacgc agaccatttc
 2280
 cctctctggg accgaagagc cgctgagcag attccaggga gcttcgtcta ctcgatccca
 2340
 ttcagcactg gaccagtcaa taaaagcaat gtgggtgacag caagtacatc catccagctc
 2400
 ctggatgaac ggaaatctcc tgtgggtggca gctgtaggca ttcagatgaa acttgaattt
 2460
 ttccaaagga agttctggac tgccagcaga cagtgtgctt ccctggatgg caaatgctcc
 2520
 atcagctgtg atgatgagac tgtgaattgt tacctcatag acaataatgg atttattttg
 2580
 gtgtctgaag actacacaca gactggagac ttttttgggtg agatcgaggg agctgtgatg
 2640
 aacaaattgc taacaatggg ctcttttaaa agaattaccc tttatgacta ccaagccatg
 2700
 tgtagagcca acaaggaaag cagcgatggc gcccatggcc tcctggatcc ttataatgcc
 2760
 ttcctctctg cagtaaaatg gatcatgaca gaacttgtct tgttcctggg ggaatttaac
 2820
 ctctgcagtt ggtggcactc cgatatgaca gctaaagccc agaaattgaa acagaccctg
 2880
 gagccttgtg atactgaata tccagcattc gtctctgagc gcaccatcaa ggagactaca
 2940
 gggaatattg cttgtgaaga ctgctccaag tcctttgtca tccagcaa atccaagcagc
 3000
 aacctgttca tgggtgggtgg ggacagcagc tgctctgtg aatctgtggc ccccatc
 3057

<210> 8
 <211> 3114
 <212> DNA
 <213> Homo sapiens

<400> 8
 atggccgggc cgggctcgcc gcgccgcgcg tcccgggggg cctcgggcgt tctcgctgcc
 60
 gcgcttctct acgccgcgct gggggacgtg gtgcgctcgg agcagcagat accgctctcc
 120
 gtggtgaagc tctgggcctc ggcttttggt ggggagataa aatccattgc tgctaagtac
 180
 tccggttccc agcttctgca aaagaaatac aaagagtatg agaaagacgt tgccatagaa
 240
 gaaattgatg gcctccaact ggtaaagaag ctggcaaaga acatggaaga gatgtttcac
 300
 aagaagtctg aggccgtcag gcgtctgggt gaggctgcag aagaagcaca cctgaaacat
 360
 gaatttgatg cagacttaca gtatgaatac ttcaatgctg tgctgataaa tgaaagggac
 420
 aaagacggga attttttgga gctgggaaag gaattcatct tagcccca aa tgaccatttt
 480
 aataatttgc ctgtgaacat cagtctaagt gacgtccaag taccaacgaa catgtacaac
 540
 aaagaccctg caattgtcaa tgggggtttat tgggtctgaat ctctaaacaa agtttttgta
 600
 gataactttg accgtgaccc atctctcata tggcagtact ttggaagtgc aaagggcttt
 660
 tttaggcagt atccggggat taaatgggaa ccagatgaga atggagtcac tgccttcgac
 720
 tgcaggaacc gaaaatggta catccaggca gcaacttctc cgaaagacgt ggtcatttta
 780
 gttgacgtca gtggcagcat gaaaggactc cgtctgacta tcgcgaagca aacagtctca
 840
 tccatttttg atacacttgg ggatgatgac ttcttcaaca taattgctta taatgaggag
 900
 cttcactatg tggaaccttg cctgaatgga actttgggtgc aagccgacag gacaaacaaa
 960
 gagcacttca gggagcatct ggacaaactt ttcgccaaag gaattggaat gttggatata
 1020
 gctctgaatg aggccttcaa cattctgagt gatttcaacc acacgggaca aggaagtatc
 1080
 tgcagtcagg ccatcatgct cataactgat ggggcggtgg acacctatga tacaatcttt
 1140
 gcaaaataca attggccaga tcgaaagggt cgcactttca catacctcat tggacgagag
 1200
 gctgcgtttg cagacaatct aaagtggatg gcctgtgcca acaaaggatt ttttaccag
 1260
 atctccacct tggctgatgt gcaggagaat gtcattggaat accttcacgt gcttagccgg
 1320
 ccaaagtca tcgaccagga gcatgatgtg gtgtggaccg aagcttacat tgacagcact
 1380
 ctgactgatg atcagggccc cgtcctgatg accactgtag ccatgcctgt gtttagtaag
 1440
 cagaacgaaa ccagatcgaa gggcattctt ctgggagtgg ttggcacaga tgtcccagtg

1801.app

1500
 aaagaacttc tgaagaccat ccccaaatac aagttaggga ttcacgggta tgcctttgca
 1560
 atcacaaata atgggtatat cctgacgcat ccggaactca ggctgctgta cgaagaagga
 1620
 aaaaagcgaa ggaaacctaa ctatagtagc gttgacctct ctgagggtgga gtgggaagac
 1680
 cgagatgacg tggtgagaaa tgctatgggtg aatcgaaaga cggggaagtt ttccatggag
 1740
 gtgaagaaga cagtggacaa agggaaacgg gttttgggtga tgacaaatga ctactattat
 1800
 acagacatca aggggtactcc tttcagttta ggtgtggcgc tttccagagg tcatgggaaa
 1860
 tattttcttcc gagggaatgt aaccatcgaa gaaggcctgc atgacttaga acatcccgat
 1920
 gtgtccttgg cagatgaatg gtcctactgc aacactgacc tacaccctga gcaccgccat
 1980
 ctgtctcagt tagaagcgat taagctctac ctaaaaggca aagaacctct gctccagtgt
 2040
 gataaagaat tgatccaaga agtccttttt gacgcggtgg tgagtgcgcc cattgaagcg
 2100
 tattggacca gcctggccct caacaaatct gaaaattctg acaagggcgt ggaggttgcc
 2160
 ttcctcggca ctgcgacggg cctctccaga atcaacctgt ttgtcggggc tgagcagctc
 2220
 accaatcagg acttcctgaa agctggcgac aaggagaaca tttttaacgc agaccatttc
 2280
 cctctctggt accgaagagc cgctgagcag attccaggga gcttcgtcta ctcgatccca
 2340
 ttcagcactg gaccagtcaa taaaagcaat gtggtgacag caagtacatc catccagctc
 2400
 ctggatgaac ggaaatctcc tgtggtggca gctgtaggca ttcagatgaa acttgaattt
 2460
 ttccaaagga agttctggac tgccagcaga cagtgtgctt ccctggatgg caaatgctcc
 2520
 atcagctgtg atgatgagac tgtgaattgt tacctcatag acaataatgg atttattttg
 2580
 gtgtctgaag actacacaca gactggagac ttttttgggtg agatcgaggg agctgtgatg
 2640
 aacaaattgc taacaatggg ctcttttaaa agaattaccc tttatgacta ccaagccatg
 2700
 tgtagagcca acaaggaaag cagcgatggc gcccatggcc tcctggatcc ttataatgcc
 2760
 ttcctctctg cagtaaaatg gatcatgaca gaacttgtct tgttcctggg ggaatttaac
 2820
 ctctgcagtt ggtggcactc cgatatgaca gctaaagccc agaaattgaa acagaccctg
 2880
 gagccttggt atactgaata tccagcattc gtctctgagc gcaccatcaa ggagactaca
 2940
 gggaatattg cttgtgaaga ctgctccaag tcctttgtca tccagcaaata cccaagcagc
 3000
 aacctgttca tgggtgggtgg ggacagcagc tgccctctgtg aatctgtggc ccccatcacc
 3060
 atggcaccca ttgaaatcag gtataatgaa tcccttaagt gtgaacgtct aaag
 3114

<210> 9
 <211> 3213
 <212> DNA
 <213> Homo sapiens

<400> 9
 atggccgggc cgggctcgcc gcgccgcgcg tcccggggggg cctcggcgct tctcgctgcc
 60
 gcgcttctct acgccgcgct gggggacgtg gtgcgctcgg agcagcagat accgctctcc
 120
 gtggtgaagc tctgggcctc ggcttttggt ggggagataa aatccattgc tgctaagtac
 180
 tccgggttccc agcttctgca aaagaaatac aaagagtatg agaaagacgt tgccatagaa
 240
 gaaattgatg gcctccaact ggtaaagaag ctggcaaaga acatggaaga gatgtttcac
 300
 aagaagtctg aggccgtcag gcgtctggtg gaggctgcag aagaagcaca cctgaaacat
 360
 gaatttgatg cagacttaca gtatgaatac ttcaatgctg tgctgataaa tgaaagggac
 420
 aaagacggga attttttgga gctgggaaag gaattcatct tagcccca aa tgaccatttt
 480
 aataatttgc ctgtgaacat cagtctaagt gacgtccaag taccaacgaa catgtacaac
 540
 aaagaccctg caattgtcaa tgggggtttat tgggtctgaat ctctaaacaa agtttttgta
 600
 gataactttg accgtgaccc atctctcata tggcagtact ttggaagtgc aaagggcttt
 660
 tttaggcagt atccggggat taaatgggaa ccagatgaga atggagtcac tgccttcgac
 720
 tgcaggaacc gaaaatggta catccaggca gcaacttctc cgaaagacgt ggtcatttta
 780
 gttgacgtca gtggcagcat gaaaggactc cgtctgacta tcgcgaagca aacagtctca
 840
 tccatttttg atacacttgg ggatgatgac ttcttcaaca taattgctta taatgaggag
 900
 cttcactatg tggaaccttg cctgaatgga actttggtgc aagccgacag gacaaacaaa
 960
 gagcacttca gggagcatct ggacaaactt ttcgccaaag gaattggaat gttggatata
 1020
 gctctgaatg aggccttcaa cattctgagt gatttcaacc acacgggaca aggaagtatc
 1080
 tgcagtcagg ccatcatgct cataactgat ggggcggtgg acacctatga tacaatcttt
 1140
 gcaaaataca attggccaga tcgaaagggt cgcactttca catacctcat tggacgagag
 1200
 gctgcggttg cagacaatct aaagtggatg gcctgtgcca acaaaggatt ttttaccag
 1260
 atctccacct tggctgatgt gcaggagaaat gtcattggaat accttcacgt gcttagccgg
 1320
 cccaaagtca tcgaccagga gcatgatgtg gtgtggaccg aagcttacat tgacagcact
 1380
 ctgactgatg atcagggccc cgtcctgatg accactgtag ccatgcctgt gtttagtaag
 1440
 cagaacgaaa ccagatcgaa gggcattctt ctgggagtggt ttggcacaga tgtcccagtg

1801.app

1500
 aaagaacttc tgaagaccat ccccaaatac aagttaggga ttcacggtta tgcctttgca
 1560
 atcacaaata atgggtatat cctgaacgcat ccggaactca ggctgctgta cgaagaagga
 1620
 aaaaagcgaa ggaaacctaa ctatagtagc gttgacctct ctgagggtgga gtgggaagac
 1680
 cgagatgacg tgttgagaaa tgctatgggtg aatcgaaaga cggggaagtt ttccatggag
 1740
 gtgaagaaga cagtggacaa agggaaacgg gttttgggtga tgacaaatga ctactattat
 1800
 acagacatca aggggtactcc tttcagttta ggtgtggcgc tttccagagg tcatgggaaa
 1860
 tattttcttcc gagggaatgt aaccatcgaa gaaggcctgc atgacttaga acatcccgat
 1920
 gtgtccttgg cagatgaatg gtcctactgc aacactgacc tacaccctga gcaccgccat
 1980
 ctgtctcagt tagaagcgat taagctctac ctaaaaggca aagaacctct gctccagtgt
 2040
 gataaagaat tgatccaaga agtccttttt gacgcggtgg tgagtgcgcc cattgaagcg
 2100
 tattggacca gcctggccct caacaaatct gaaaattctg acaagggcgt ggaggttgcc
 2160
 ttctctggca ctgcacggg cctctccaga atcaacctgt ttgtcggggc tgagcagctc
 2220
 accaatcagg acttcctgaa agctggcgac aaggagaaca tttttaacgc agaccatttc
 2280
 cctctctggt accgaagagc cgctgagcag attccaggga gcttcgtcta ctcgatccca
 2340
 ttcagcactg gaccagtcaa taaaagcaat gtggtgacag caagtacatc catccagctc
 2400
 ctggatgaac ggaaatctcc tgtggtggca gctgtaggca ttcagatgaa acttgaattt
 2460
 ttccaaagga agttctggac tgccagcaga cagtgtgctt ccctggatgg caaatgctcc
 2520
 atcagctgtg atgatgagac tgtgaattgt tacctcatag acaataatgg atttattttg
 2580
 gtgtctgaag actacacaca gactggagac ttttttgggtg agatcgaggg agctgtgatg
 2640
 aacaaattgc taacaatggg ctcttttaaa agaattaccc tttatgacta ccaagccatg
 2700
 tgtagagcca acaaggaaag cagcgatggc gcccatggcc tcctggatcc ttataatgcc
 2760
 ttctctctg cagtaaaatg gatcatgaca gaacttgtct tgttcctggg ggaatttaac
 2820
 ctctgcagtt ggtggcactc cgatatgaca gctaaagccc agaaattgaa acagaccctg
 2880
 gagccttggt atactgaata tccagcattc gtctctgagc gcaccatcaa ggagactaca
 2940
 gggaatattg cttgtgaaga ctgctccaag tcctttgtca tccagcaa at cccaagcagc
 3000
 aacctgttca tgggtgggtgg ggacagcagc tgctctgtg aatctgtggc ccccatcacc
 3060
 atggcaccca ttgaaatcag gtataatgaa tcccttaagt gtgaacgtct aaaggcccag
 3120
 aagatcagaa gggcccagaa gatcagaagg cggccagaat cttgtcatgg cttccatcct

3180
gaggagaatg caagggagtg tgggggtgcg ccg
3213

<210> 10
<211> 1019
<212> PRT
<213> Homo sapiens

<400> 10
Met Ala Gly Pro Gly Ser Pro Arg Arg Ala Ser Arg Gly Ala Ser Ala
1 5 10 15
Leu Leu Ala Ala Ala Leu Leu Tyr Ala Ala Leu Gly Asp Val Val Arg
20 25 30
Ser Glu Gln Gln Ile Pro Leu Ser Val Val Lys Leu Trp Ala Ser Ala
35 40 45
Phe Gly Gly Glu Ile Lys Ser Ile Ala Ala Lys Tyr Ser Gly Ser Gln
50 55 60
Leu Leu Gln Lys Lys Tyr Lys Glu Tyr Glu Lys Asp Val Ala Ile Glu
65 70 75 80
Glu Ile Asp Gly Leu Gln Leu Val Lys Lys Leu Ala Lys Asn Met Glu
85 90 95
Glu Met Phe His Lys Lys Ser Glu Ala Val Arg Arg Leu Val Glu Ala
100 105 110
Ala Glu Glu Ala His Leu Lys His Glu Phe Asp Ala Asp Leu Gln Tyr
115 120 125
Glu Tyr Phe Asn Ala Val Leu Ile Asn Glu Arg Asp Lys Asp Gly Asn
130 135 140
Phe Leu Glu Leu Gly Lys Glu Phe Ile Leu Ala Pro Asn Asp His Phe
145 150 155 160
Asn Asn Leu Pro Val Asn Ile Ser Leu Ser Asp Val Gln Val Pro Thr
165 170 175
Asn Met Tyr Asn Lys Asp Pro Ala Ile Val Asn Gly Val Tyr Trp Ser
180 185 190
Glu Ser Leu Asn Lys Val Phe Val Asp Asn Phe Asp Arg Asp Pro Ser
195 200 205
Leu Ile Trp Gln Tyr Phe Gly Ser Ala Lys Gly Phe Phe Arg Gln Tyr
210 215 220
Pro Gly Ile Lys Trp Glu Pro Asp Glu Asn Gly Val Ile Ala Phe Asp
225 230 235 240

1801.app

Cys	Arg	Asn	Arg	Lys 245	Trp	Tyr	Ile	Gln	Ala 250	Ala	Thr	Ser	Pro	Lys	Asp 255
Val	Val	Ile	Leu 260	Val	Asp	Val	Ser	Gly 265	Ser	Met	Lys	Gly	Leu 270	Arg	Leu
Thr	Ile	Ala 275	Lys	Gln	Thr	Val	Ser 280	Ser	Ile	Leu	Asp	Thr 285	Leu	Gly	Asp
Asp	Asp 290	Phe	Phe	Asn	Ile	Ile 295	Ala	Tyr	Asn	Glu	Glu 300	Leu	His	Tyr	Val
Glu 305	Pro	Cys	Leu	Asn	Gly 310	Thr	Leu	Val	Gln	Ala 315	Asp	Arg	Thr	Asn	Lys 320
Glu	His	Phe	Arg	Glu 325	His	Leu	Asp	Lys	Leu 330	Phe	Ala	Lys	Gly	Ile 335	Gly
Met	Leu	Asp	Ile 340	Ala	Leu	Asn	Glu	Ala 345	Phe	Asn	Ile	Leu	Ser 350	Asp	Phe
Asn	His	Thr 355	Gly	Gln	Gly	Ser	Ile 360	Cys	Ser	Gln	Ala	Ile 365	Met	Leu	Ile
Thr	Asp 370	Gly	Ala	Val	Asp	Thr 375	Tyr	Asp	Thr	Ile	Phe 380	Ala	Lys	Tyr	Asn
Trp 385	Pro	Asp	Arg	Lys	Val 390	Arg	Ile	Phe	Thr	Tyr 395	Leu	Ile	Gly	Arg	Glu 400
Ala	Ala	Phe	Ala	Asp 405	Asn	Leu	Lys	Trp	Met 410	Ala	Cys	Ala	Asn	Lys	Gly 415
Phe	Phe	Thr	Gln 420	Ile	Ser	Thr	Leu	Ala 425	Asp	Val	Gln	Glu	Asn 430	Val	Met
Glu	Tyr	Leu 435	His	Val	Leu	Ser	Arg 440	Pro	Lys	Val	Ile	Asp 445	Gln	Glu	His
Asp	Val 450	Val	Trp	Thr	Glu	Ala 455	Tyr	Ile	Asp	Ser	Thr 460	Leu	Thr	Asp	Asp
Gln 465	Gly	Pro	Val	Leu	Met 470	Thr	Thr	Val	Ala	Met 475	Pro	Val	Phe	Ser	Lys 480
Gln	Asn	Glu	Thr	Arg 485	Ser	Lys	Gly	Ile	Leu 490	Leu	Gly	Val	Val	Gly 495	Thr
Asp	Val	Pro	Val 500	Lys	Glu	Leu	Leu	Lys 505	Thr	Ile	Pro	Lys	Tyr 510	Lys	Leu
Gly	Ile	His 515	Gly	Tyr	Ala	Phe	Ala 520	Ile	Thr	Asn	Asn	Gly 525	Tyr	Ile	Leu
Thr	His 530	Pro	Glu	Leu	Arg	Leu 535	Leu	Tyr	Glu	Glu	Gly 540	Lys	Lys	Arg	Arg

1801.app

Lys 545	Pro	Asn	Tyr	Ser	Ser 550	Val	Asp	Leu	Ser	Glu 555	Val	Glu	Trp	Glu	Asp 560
Arg	Asp	Asp	Val	Leu 565	Arg	Asn	Ala	Met	Val 570	Asn	Arg	Lys	Thr	Gly 575	Lys
Phe	Ser	Met	Glu 580	Val	Lys	Lys	Thr	Val 585	Asp	Lys	Gly	Lys	Arg 590	Val	Leu
Val	Met	Thr 595	Asn	Asp	Tyr	Tyr	Tyr 600	Thr	Asp	Ile	Lys	Gly 605	Thr	Pro	Phe
Ser	Leu 610	Gly	Val	Ala	Leu	Ser 615	Arg	Gly	His	Gly	Lys 620	Tyr	Phe	Phe	Arg
Gly 625	Asn	Val	Thr	Ile	Glu 630	Glu	Gly	Leu	His	Asp 635	Leu	Glu	His	Pro	Asp 640
Val	Ser	Leu	Ala	Asp 645	Glu	Trp	Ser	Tyr	Cys 650	Asn	Thr	Asp	Leu	His 655	Pro
Glu	His	Arg	His 660	Leu	Ser	Gln	Leu	Glu 665	Ala	Ile	Lys	Leu	Tyr 670	Leu	Lys
Gly	Lys	Glu 675	Pro	Leu	Leu	Gln	Cys 680	Asp	Lys	Glu	Leu	Ile 685	Gln	Glu	Val
Leu	Phe 690	Asp	Ala	Val	Val	Ser 695	Ala	Pro	Ile	Glu	Ala 700	Tyr	Trp	Thr	Ser
Leu 705	Ala	Leu	Asn	Lys	Ser 710	Glu	Asn	Ser	Asp	Lys 715	Gly	Val	Glu	Val	Ala 720
Phe	Leu	Gly	Thr	Arg 725	Thr	Gly	Leu	Ser	Arg 730	Ile	Asn	Leu	Phe	Val 735	Gly
Ala	Glu	Gln	Leu 740	Thr	Asn	Gln	Asp	Phe 745	Leu	Lys	Ala	Gly	Asp 750	Lys	Glu
Asn	Ile	Phe 755	Asn	Ala	Asp	His	Phe 760	Pro	Leu	Trp	Tyr	Arg 765	Arg	Ala	Ala
Glu	Gln 770	Ile	Pro	Gly	Ser	Phe 775	Val	Tyr	Ser	Ile	Pro 780	Phe	Ser	Thr	Gly
Pro 785	Val	Asn	Lys	Ser	Asn 790	Val	Val	Thr	Ala	Ser 795	Thr	Ser	Ile	Gln	Leu 800
Leu	Asp	Glu	Arg	Lys 805	Ser	Pro	Val	Val	Ala 810	Ala	Val	Gly	Ile	Gln 815	Met
Lys	Leu	Glu	Phe 820	Phe	Gln	Arg	Lys	Phe 825	Trp	Thr	Ala	Ser	Arg 830	Gln	Cys
Ala	Ser	Leu	Asp	Gly	Lys	Cys	Ser	Ile	Ser	Cys	Asp	Asp	Glu	Thr	Val

1801.app

835						840						845			
Asn	Cys	Tyr	Leu	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Val	Ser	Glu	Asp
	850					855					860				
Tyr	Thr	Gln	Thr	Gly	Asp	Phe	Phe	Gly	Glu	Ile	Glu	Gly	Ala	Val	Met
865					870					875					880
Asn	Lys	Leu	Leu	Thr	Met	Gly	Ser	Phe	Lys	Arg	Ile	Thr	Leu	Tyr	Asp
				885					890					895	
Tyr	Gln	Ala	Met	Cys	Arg	Ala	Asn	Lys	Glu	Ser	Ser	Asp	Gly	Ala	His
			900					905					910		
Gly	Leu	Leu	Asp	Pro	Tyr	Asn	Ala	Phe	Leu	Ser	Ala	Val	Lys	Trp	Ile
		915					920					925			
Met	Thr	Glu	Leu	Val	Leu	Phe	Leu	Val	Glu	Phe	Asn	Leu	Cys	Ser	Trp
	930					935					940				
Trp	His	Ser	Asp	Met	Thr	Ala	Lys	Ala	Gln	Lys	Leu	Lys	Gln	Thr	Leu
945					950					955					960
Glu	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Ala	Phe	Val	Ser	Glu	Arg	Thr	Ile
				965					970					975	
Lys	Glu	Thr	Thr	Gly	Asn	Ile	Ala	Cys	Glu	Asp	Cys	Ser	Lys	Ser	Phe
			980					985					990		
Val	Ile	Gln	Gln	Ile	Pro	Ser	Ser	Asn	Leu	Phe	Met	Val	Val	Val	Asp
		995					1000				1005				
Ser	Ser	Cys	Leu	Cys	Glu	Ser	Val	Ala	Pro	Ile					
	1010					1015									

<210> 11
 <211> 1038
 <212> PRT
 <213> Homo sapiens

<400> 11
 Met Ala Gly Pro Gly Ser Pro Arg Arg Ala Ser Arg Gly Ala Ser Ala
 1 5 10 15
 Leu Leu Ala Ala Ala Leu Leu Tyr Ala Ala Leu Gly Asp Val Val Arg
 20 25 30
 Ser Glu Gln Gln Ile Pro Leu Ser Val Val Lys Leu Trp Ala Ser Ala
 35 40 45
 Phe Gly Gly Glu Ile Lys Ser Ile Ala Ala Lys Tyr Ser Gly Ser Gln
 50 55 60
 Leu Leu Gln Lys Lys Tyr Lys Glu Tyr Glu Lys Asp Val Ala Ile Glu

65	70						75						80			
Glu	Ile	Asp	Gly	Leu	Gln	Leu	Val	Lys	Lys	Leu	Ala	Lys	Asn	Met	Glu	
				85					90					95		
Glu	Met	Phe	His	Lys	Lys	Ser	Glu	Ala	Val	Arg	Arg	Leu	Val	Glu	Ala	
			100					105					110			
Ala	Glu	Glu	Ala	His	Leu	Lys	His	Glu	Phe	Asp	Ala	Asp	Leu	Gln	Tyr	
		115					120					125				
Glu	Tyr	Phe	Asn	Ala	Val	Leu	Ile	Asn	Glu	Arg	Asp	Lys	Asp	Gly	Asn	
	130					135					140					
Phe	Leu	Glu	Leu	Gly	Lys	Glu	Phe	Ile	Leu	Ala	Pro	Asn	Asp	His	Phe	
145					150					155					160	
Asn	Asn	Leu	Pro	Val	Asn	Ile	Ser	Leu	Ser	Asp	Val	Gln	Val	Pro	Thr	
				165					170					175		
Asn	Met	Tyr	Asn	Lys	Asp	Pro	Ala	Ile	Val	Asn	Gly	Val	Tyr	Trp	Ser	
			180					185					190			
Glu	Ser	Leu	Asn	Lys	Val	Phe	Val	Asp	Asn	Phe	Asp	Arg	Asp	Pro	Ser	
		195					200					205				
Leu	Ile	Trp	Gln	Tyr	Phe	Gly	Ser	Ala	Lys	Gly	Phe	Phe	Arg	Gln	Tyr	
	210					215					220					
Pro	Gly	Ile	Lys	Trp	Glu	Pro	Asp	Glu	Asn	Gly	Val	Ile	Ala	Phe	Asp	
225					230					235					240	
Cys	Arg	Asn	Arg	Lys	Trp	Tyr	Ile	Gln	Ala	Ala	Thr	Ser	Pro	Lys	Asp	
				245					250					255		
Val	Val	Ile	Leu	Val	Asp	Val	Ser	Gly	Ser	Met	Lys	Gly	Leu	Arg	Leu	
			260					265					270			
Thr	Ile	Ala	Lys	Gln	Thr	Val	Ser	Ser	Ile	Leu	Asp	Thr	Leu	Gly	Asp	
		275					280					285				
Asp	Asp	Phe	Phe	Asn	Ile	Ile	Ala	Tyr	Asn	Glu	Glu	Leu	His	Tyr	Val	
	290					295					300					
Glu	Pro	Cys	Leu	Asn	Gly	Thr	Leu	Val	Gln	Ala	Asp	Arg	Thr	Asn	Lys	
305					310					315					320	
Glu	His	Phe	Arg	Glu	His	Leu	Asp	Lys	Leu	Phe	Ala	Lys	Gly	Ile	Gly	
				325					330					335		
Met	Leu	Asp	Ile	Ala	Leu	Asn	Glu	Ala	Phe	Asn	Ile	Leu	Ser	Asp	Phe	
			340					345					350			
Asn	His	Thr	Gly	Gln	Gly	Ser	Ile	Cys	Ser	Gln	Ala	Ile	Met	Leu	Ile	
		355					360					365				

1801.app

Thr	Asp	Gly	Ala	Val	Asp	Thr	Tyr	Asp	Thr	Ile	Phe	Ala	Lys	Tyr	Asn
370						375					380				
Trp	Pro	Asp	Arg	Lys	Val	Arg	Ile	Phe	Thr	Tyr	Leu	Ile	Gly	Arg	Glu
385					390					395					400
Ala	Ala	Phe	Ala	Asp	Asn	Leu	Lys	Trp	Met	Ala	Cys	Ala	Asn	Lys	Gly
				405					410					415	
Phe	Phe	Thr	Gln	Ile	Ser	Thr	Leu	Ala	Asp	Val	Gln	Glu	Asn	Val	Met
			420					425					430		
Glu	Tyr	Leu	His	Val	Leu	Ser	Arg	Pro	Lys	Val	Ile	Asp	Gln	Glu	His
		435					440					445			
Asp	Val	Val	Trp	Thr	Glu	Ala	Tyr	Ile	Asp	Ser	Thr	Leu	Thr	Asp	Asp
	450					455					460				
Gln	Gly	Pro	Val	Leu	Met	Thr	Thr	Val	Ala	Met	Pro	Val	Phe	Ser	Lys
465					470					475					480
Gln	Asn	Glu	Thr	Arg	Ser	Lys	Gly	Ile	Leu	Leu	Gly	Val	Val	Gly	Thr
				485					490					495	
Asp	Val	Pro	Val	Lys	Glu	Leu	Leu	Lys	Thr	Ile	Pro	Lys	Tyr	Lys	Leu
			500					505					510		
Gly	Ile	His	Gly	Tyr	Ala	Phe	Ala	Ile	Thr	Asn	Asn	Gly	Tyr	Ile	Leu
		515					520					525			
Thr	His	Pro	Glu	Leu	Arg	Leu	Leu	Tyr	Glu	Glu	Gly	Lys	Lys	Arg	Arg
	530					535					540				
Lys	Pro	Asn	Tyr	Ser	Ser	Val	Asp	Leu	Ser	Glu	Val	Glu	Trp	Glu	Asp
545					550					555					560
Arg	Asp	Asp	Val	Leu	Arg	Asn	Ala	Met	Val	Asn	Arg	Lys	Thr	Gly	Lys
				565					570					575	
Phe	Ser	Met	Glu	Val	Lys	Lys	Thr	Val	Asp	Lys	Gly	Lys	Arg	Val	Leu
			580					585					590		
Val	Met	Thr	Asn	Asp	Tyr	Tyr	Tyr	Thr	Asp	Ile	Lys	Gly	Thr	Pro	Phe
		595					600					605			
Ser	Leu	Gly	Val	Ala	Leu	Ser	Arg	Gly	His	Gly	Lys	Tyr	Phe	Phe	Arg
	610					615					620				
Gly	Asn	Val	Thr	Ile	Glu	Glu	Gly	Leu	His	Asp	Leu	Glu	His	Pro	Asp
625					630					635					640
Val	Ser	Leu	Ala	Asp	Glu	Trp	Ser	Tyr	Cys	Asn	Thr	Asp	Leu	His	Pro
				645					650					655	
Glu	His	Arg	His	Leu	Ser	Gln	Leu	Glu	Ala	Ile	Lys	Leu	Tyr	Leu	Lys
			660					665					670		

1801.app

Gly	Lys	Glu	Pro	Leu	Leu	Gln	Cys	Asp	Lys	Glu	Leu	Ile	Gln	Glu	Val
		675					680					685			
Leu	Phe	Asp	Ala	Val	Val	Ser	Ala	Pro	Ile	Glu	Ala	Tyr	Trp	Thr	Ser
	690					695					700				
Leu	Ala	Leu	Asn	Lys	Ser	Glu	Asn	Ser	Asp	Lys	Gly	Val	Glu	Val	Ala
705					710					715					720
Phe	Leu	Gly	Thr	Arg	Thr	Gly	Leu	Ser	Arg	Ile	Asn	Leu	Phe	Val	Gly
				725					730					735	
Ala	Glu	Gln	Leu	Thr	Asn	Gln	Asp	Phe	Leu	Lys	Ala	Gly	Asp	Lys	Glu
			740					745					750		
Asn	Ile	Phe	Asn	Ala	Asp	His	Phe	Pro	Leu	Trp	Tyr	Arg	Arg	Ala	Ala
		755					760					765			
Glu	Gln	Ile	Pro	Gly	Ser	Phe	Val	Tyr	Ser	Ile	Pro	Phe	Ser	Thr	Gly
	770					775					780				
Pro	Val	Asn	Lys	Ser	Asn	Val	Val	Thr	Ala	Ser	Thr	Ser	Ile	Gln	Leu
785					790					795					800
Leu	Asp	Glu	Arg	Lys	Ser	Pro	Val	Val	Ala	Ala	Val	Gly	Ile	Gln	Met
				805					810					815	
Lys	Leu	Glu	Phe	Phe	Gln	Arg	Lys	Phe	Trp	Thr	Ala	Ser	Arg	Gln	Cys
			820					825					830		
Ala	Ser	Leu	Asp	Gly	Lys	Cys	Ser	Ile	Ser	Cys	Asp	Asp	Glu	Thr	Val
		835					840					845			
Asn	Cys	Tyr	Leu	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Val	Ser	Glu	Asp
	850					855					860				
Tyr	Thr	Gln	Thr	Gly	Asp	Phe	Phe	Gly	Glu	Ile	Glu	Gly	Ala	Val	Met
865					870					875					880
Asn	Lys	Leu	Leu	Thr	Met	Gly	Ser	Phe	Lys	Arg	Ile	Thr	Leu	Tyr	Asp
				885					890					895	
Tyr	Gln	Ala	Met	Cys	Arg	Ala	Asn	Lys	Glu	Ser	Ser	Asp	Gly	Ala	His
			900					905					910		
Gly	Leu	Leu	Asp	Pro	Tyr	Asn	Ala	Phe	Leu	Ser	Ala	Val	Lys	Trp	Ile
		915					920					925			
Met	Thr	Glu	Leu	Val	Leu	Phe	Leu	Val	Glu	Phe	Asn	Leu	Cys	Ser	Trp
	930					935					940				
Trp	His	Ser	Asp	Met	Thr	Ala	Lys	Ala	Gln	Lys	Leu	Lys	Gln	Thr	Leu
945					950					955					960
Glu	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Ala	Phe	Val	Ser	Glu	Arg	Thr	Ile

975

<400> 12															
Met	Ala	Gly	Pro	Gly	Ser	Pro	Arg	Arg	Ala	Ser	Arg	Gly	Ala	Ser	Ala
1				5					10					15	
Leu	Leu	Ala	Ala	Ala	Leu	Leu	Tyr	Ala	Ala	Leu	Gly	Asp	Val	Val	Arg
			20					25					30		
Ser	Glu	Gln	Gln	Ile	Pro	Leu	Ser	Val	Val	Lys	Leu	Trp	Ala	Ser	Ala
		35					40					45			
Phe	Gly	Gly	Glu	Ile	Lys	Ser	Ile	Ala	Ala	Lys	Tyr	Ser	Gly	Ser	Gln
	50					55					60				
Leu	Leu	Gln	Lys	Lys	Tyr	Lys	Glu	Tyr	Glu	Lys	Asp	Val	Ala	Ile	Glu
65					70					75					80
Glu	Ile	Asp	Gly	Leu	Gln	Leu	Val	Lys	Lys	Leu	Ala	Lys	Asn	Met	Glu
				85					90					95	
Glu	Met	Phe	His	Lys	Lys	Ser	Glu	Ala	Val	Arg	Arg	Leu	Val	Glu	Ala
			100					105					110		
Ala	Glu	Glu	Ala	His	Leu	Lys	His	Glu	Phe	Asp	Ala	Asp	Leu	Gln	Tyr
		115					120					125			
Glu	Tyr	Phe	Asn	Ala	Val	Leu	Ile	Asn	Glu	Arg	Asp	Lys	Asp	Gly	Asn
	130					135					140				
Phe	Leu	Glu	Leu	Gly	Lys	Glu	Phe	Ile	Leu	Ala	Pro	Asn	Asp	His	Phe
145					150					155					160
Asn	Asn	Leu	Pro	Val	Asn	Ile	Ser	Leu	Ser	Asp	Val	Gln	Val	Pro	Thr
				165					170					175	
Asn	Met	Tyr	Asn	Lys	Asp	Pro	Ala	Ile	Val	Asn	Gly	Val	Tyr	Trp	Ser

1801.app															
180						185						190			
Glu	Ser	Leu	Asn	Lys	Val	Phe	Val	Asp	Asn	Phe	Asp	Arg	Asp	Pro	Ser
		195					200					205			
Leu	Ile	Trp	Gln	Tyr	Phe	Gly	Ser	Ala	Lys	Gly	Phe	Phe	Arg	Gln	Tyr
	210					215					220				
Pro	Gly	Ile	Lys	Trp	Glu	Pro	Asp	Glu	Asn	Gly	Val	Ile	Ala	Phe	Asp
225					230					235					240
Cys	Arg	Asn	Arg	Lys	Trp	Tyr	Ile	Gln	Ala	Ala	Thr	Ser	Pro	Lys	Asp
				245					250					255	
Val	Val	Ile	Leu	Val	Asp	Val	Ser	Gly	Ser	Met	Lys	Gly	Leu	Arg	Leu
			260					265					270		
Thr	Ile	Ala	Lys	Gln	Thr	Val	Ser	Ser	Ile	Leu	Asp	Thr	Leu	Gly	Asp
		275					280					285			
Asp	Asp	Phe	Phe	Asn	Ile	Ile	Ala	Tyr	Asn	Glu	Glu	Leu	His	Tyr	Val
	290					295					300				
Glu	Pro	Cys	Leu	Asn	Gly	Thr	Leu	Val	Gln	Ala	Asp	Arg	Thr	Asn	Lys
305					310					315					320
Glu	His	Phe	Arg	Glu	His	Leu	Asp	Lys	Leu	Phe	Ala	Lys	Gly	Ile	Gly
				325					330					335	
Met	Leu	Asp	Ile	Ala	Leu	Asn	Glu	Ala	Phe	Asn	Ile	Leu	Ser	Asp	Phe
			340					345					350		
Asn	His	Thr	Gly	Gln	Gly	Ser	Ile	Cys	Ser	Gln	Ala	Ile	Met	Leu	Ile
		355					360					365			
Thr	Asp	Gly	Ala	Val	Asp	Thr	Tyr	Asp	Thr	Ile	Phe	Ala	Lys	Tyr	Asn
	370					375					380				
Trp	Pro	Asp	Arg	Lys	Val	Arg	Ile	Phe	Thr	Tyr	Leu	Ile	Gly	Arg	Glu
385					390					395					400
Ala	Ala	Phe	Ala	Asp	Asn	Leu	Lys	Trp	Met	Ala	Cys	Ala	Asn	Lys	Gly
				405					410					415	
Phe	Phe	Thr	Gln	Ile	Ser	Thr	Leu	Ala	Asp	Val	Gln	Glu	Asn	Val	Met
			420					425					430		
Glu	Tyr	Leu	His	Val	Leu	Ser	Arg	Pro	Lys	Val	Ile	Asp	Gln	Glu	His
		435					440					445			
Asp	Val	Val	Trp	Thr	Glu	Ala	Tyr	Ile	Asp	Ser	Thr	Leu	Thr	Asp	Asp
	450					455					460				
Gln	Gly	Pro	Val	Leu	Met	Thr	Thr	Val	Ala	Met	Pro	Val	Phe	Ser	Lys
465					470					475					480

1801.app

Gln	Asn	Glu	Thr	Arg	Ser	Lys	Gly	Ile	Leu	Leu	Gly	Val	Val	Gly	Thr
				485					490					495	
Asp	Val	Pro	Val	Lys	Glu	Leu	Leu	Lys	Thr	Ile	Pro	Lys	Tyr	Lys	Leu
			500					505					510		
Gly	Ile	His	Gly	Tyr	Ala	Phe	Ala	Ile	Thr	Asn	Asn	Gly	Tyr	Ile	Leu
		515					520					525			
Thr	His	Pro	Glu	Leu	Arg	Leu	Leu	Tyr	Glu	Glu	Gly	Lys	Lys	Arg	Arg
	530					535					540				
Lys	Pro	Asn	Tyr	Ser	Ser	Val	Asp	Leu	Ser	Glu	Val	Glu	Trp	Glu	Asp
545					550					555				560	
Arg	Asp	Asp	Val	Leu	Arg	Asn	Ala	Met	Val	Asn	Arg	Lys	Thr	Gly	Lys
				565					570					575	
Phe	Ser	Met	Glu	Val	Lys	Lys	Thr	Val	Asp	Lys	Gly	Lys	Arg	Val	Leu
			580					585					590		
Val	Met	Thr	Asn	Asp	Tyr	Tyr	Tyr	Thr	Asp	Ile	Lys	Gly	Thr	Pro	Phe
		595					600					605			
Ser	Leu	Gly	Val	Ala	Leu	Ser	Arg	Gly	His	Gly	Lys	Tyr	Phe	Phe	Arg
	610					615					620				
Gly	Asn	Val	Thr	Ile	Glu	Glu	Gly	Leu	His	Asp	Leu	Glu	His	Pro	Asp
625					630					635				640	
Val	Ser	Leu	Ala	Asp	Glu	Trp	Ser	Tyr	Cys	Asn	Thr	Asp	Leu	His	Pro
				645					650					655	
Glu	His	Arg	His	Leu	Ser	Gln	Leu	Glu	Ala	Ile	Lys	Leu	Tyr	Leu	Lys
			660					665					670		
Gly	Lys	Glu	Pro	Leu	Leu	Gln	Cys	Asp	Lys	Glu	Leu	Ile	Gln	Glu	Val
		675					680					685			
Leu	Phe	Asp	Ala	Val	Val	Ser	Ala	Pro	Ile	Glu	Ala	Tyr	Trp	Thr	Ser
	690					695					700				
Leu	Ala	Leu	Asn	Lys	Ser	Glu	Asn	Ser	Asp	Lys	Gly	Val	Glu	Val	Ala
705					710					715				720	
Phe	Leu	Gly	Thr	Arg	Thr	Gly	Leu	Ser	Arg	Ile	Asn	Leu	Phe	Val	Gly
				725					730					735	
Ala	Glu	Gln	Leu	Thr	Asn	Gln	Asp	Phe	Leu	Lys	Ala	Gly	Asp	Lys	Glu
			740				745						750		
Asn	Ile	Phe	Asn	Ala	Asp	His	Phe	Pro	Leu	Trp	Tyr	Arg	Arg	Ala	Ala
		755					760					765			
Glu	Gln	Ile	Pro	Gly	Ser	Phe	Val	Tyr	Ser	Ile	Pro	Phe	Ser	Thr	Gly
	770					775					780				

1801.app

Pro	Val	Asn	Lys	Ser	Asn	Val	Val	Thr	Ala	Ser	Thr	Ser	Ile	Gln	Leu	785	790	795	800
Leu	Asp	Glu	Arg	Lys	Ser	Pro	Val	Val	Ala	Ala	Val	Gly	Ile	Gln	Met		805	810	815
Lys	Leu	Glu	Phe	Phe	Gln	Arg	Lys	Phe	Trp	Thr	Ala	Ser	Arg	Gln	Cys		820	825	830
Ala	Ser	Leu	Asp	Gly	Lys	Cys	Ser	Ile	Ser	Cys	Asp	Asp	Glu	Thr	Val		835	840	845
Asn	Cys	Tyr	Leu	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Val	Ser	Glu	Asp		850	855	860
Tyr	Thr	Gln	Thr	Gly	Asp	Phe	Phe	Gly	Glu	Ile	Glu	Gly	Ala	Val	Met		865	870	875
Asn	Lys	Leu	Leu	Thr	Met	Gly	Ser	Phe	Lys	Arg	Ile	Thr	Leu	Tyr	Asp		885	890	895
Tyr	Gln	Ala	Met	Cys	Arg	Ala	Asn	Lys	Glu	Ser	Ser	Asp	Gly	Ala	His		900	905	910
Gly	Leu	Leu	Asp	Pro	Tyr	Asn	Ala	Phe	Leu	Ser	Ala	Val	Lys	Trp	Ile		915	920	925
Met	Thr	Glu	Leu	Val	Leu	Phe	Leu	Val	Glu	Phe	Asn	Leu	Cys	Ser	Trp		930	935	940
Trp	His	Ser	Asp	Met	Thr	Ala	Lys	Ala	Gln	Lys	Leu	Lys	Gln	Thr	Leu		945	950	955
Glu	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Ala	Phe	Val	Ser	Glu	Arg	Thr	Ile		965	970	975
Lys	Glu	Thr	Thr	Gly	Asn	Ile	Ala	Cys	Glu	Asp	Cys	Ser	Lys	Ser	Phe		980	985	990
Val	Ile	Gln	Gln	Ile	Pro	Ser	Ser	Asn	Leu	Phe	Met	Val	Val	Val	Asp		995	1000	1005
Ser	Ser	Cys	Leu	Cys	Glu	Ser	Val	Ala	Pro	Ile	Thr	Met	Ala	Pro	Ile		1010	1015	1020
Glu	Ile	Arg	Tyr	Asn	Glu	Ser	Leu	Lys	Cys	Glu	Arg	Leu	Lys	Ala	Gln		1025	1030	1035
Lys	Ile	Arg	Arg	Arg	Pro	Glu	Ser	Cys	His	Gly	Phe	His	Pro	Glu	Glu		1045	1050	1055
Asn	Ala	Arg	Glu	Cys	Gly	Gly	Ala	Pro									1060	1065	

<210> 13
<211> 912
<212> DNA
<213> Homo sapiens

<400> 13
agtggcctcc tgagaagcag cttgttcgtg ggctccgaga aggtctccga caggaagttc
60
ctgacacctg aggacgaggc cagcgtgttc accctggacc gcttcccgt gtggtaccgc
120
caggcctcag agcatcctgc tggcagcttc gtcttcaacc tccgctgggc agaaggacca
180
gaaagtgcgg gtgaacccat ggtggtgacg gcaagcacag ctgtggcggt gaccgtggac
240
aagaggacag ccattgctgc agccgcgggc gtccaaatga agctggaatt cctccagcgc
300
aaattctggg cggcaacgcg gcagtgcagc actgtggatg ggccgtgcac acagagctgc
360
gaggacagtg atctggactg cttcgtcatc gacaacaacg ggttcattct gatctccaag
420
aggtcccagag agacgggaag atttctgggg gaggtggatg gtgctgtcct gaccagctg
480
ctcagcatgg ggggtgttcag ccaagtgact atgtatgact atcaggccat gtgcaaacc
540
tcgagtcacc accacagtgc agcccagccc ctggtcagcc caatttctgc cttcttgacg
600
gcgaccaggt ggctgctgca ggagctggtg ctgttcctgc tggagtggag tgtctggggc
660
tcctgggtacg acagaggggc cgaggccaaa agtgtcttcc atcactccca caaacacaag
720
aagcaggacc cgctgcagcc ctgcgacacg gagtaccccg tggtcgtgta ccagccggcc
780
atccgggagg ccaacgggat cgtggagtgc gggccctgcc agaaggtatt tgtggtgcag
840
cagattccca acagtaacct cctcctcctg gtgacagacc ccacctgtga ctgcagcatc
900
ttcccaccag tg
912

<210> 14
<211> 969
<212> DNA
<213> Homo sapiens

<400> 14
agtggcctcc tgagaagcag cttgttcgtg ggctccgaga aggtctccga caggaagttc
60
ctgacacctg aggacgaggc cagcgtgttc accctggacc gcttcccgt gtggtaccgc
120
caggcctcag agcatcctgc tggcagcttc gtcttcaacc tccgctgggc agaaggacca
180
gaaagtgcgg gtgaacccat ggtggtgacg gcaagcacag ctgtggcggt gaccgtggac
240
aagaggacag ccattgctgc agccgcgggc gtccaaatga agctggaatt cctccagcgc

1801.app

300
 aaattctggg cggcaacgcg gcagtgcagc actgtggatg ggccgtgcac acagagctgc
 360
 gaggacagtg atctggactg cttcgtcatc gacaacaacg ggttcattct gatctccaag
 420
 aggtcccgag agacgggaag atttctgggg gaggtggatg gtgctgtcct gaccagctg
 480
 ctgagcatgg ggggtgttcag ccaagtgact atgtatgact atcaggccat gtgcaaacc
 540
 tcgagtcacc accacagtgc agcccagccc ctggtcagcc caatttctgc cttcttgacg
 600
 gcgaccaggt ggctgctgca ggagctgggt ctgttcctgc tggagtggag tgtctggggc
 660
 tcctgggtacg acagaggggc cgaggccaaa agtgtcttcc atcactccca caaacacaag
 720
 aagcaggacc cgctgcagcc ctgacgacacg gactaccccg tgttcgtgta ccagccggcc
 780
 atccgggagg ccaacgggat cgtggagtgc gggccctgcc agaaggattt tgtgggtgcag
 840
 cagattccca acagtaacct cctcctcctg gtgacagacc ccacctgtga ctgcagcatc
 900
 ttcccaccag tgctgcagga ggacgacagaa gtcaaata atgcctctgt caaatgtgac
 960
 cggatgcgc
 969

<210> 15
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 15
 agtggcctcc tgagaagcag cttgttcgtg ggctccgaga aggtctccga caggaagtcc
 60
 ctgacacctg aggacgaggc cagcgtgttc accctggacc gcttcccgtg gtggtaccgc
 120
 caggcctcag agcatcctgc tggcagcttc gtcttcaacc tccgctgggc agaaggacca
 180
 gaaagtgcgg gtgaacccat ggtgggtgacg gcaagcacag ctgtggcggt gaccgtggac
 240
 aagaggacag ccattgctgc agccgcgggc gtccaaatga agctggaatt cctccagcgc
 300
 aaattctggg cggcaacgcg gcagtgcagc actgtggatg ggccgtgcac acagagctgc
 360
 gaggacagtg atctggactg cttcgtcatc gacaacaacg ggttcattct gatctccaag
 420
 aggtcccgag agacgggaag atttctgggg gaggtggatg gtgctgtcct gaccagctg
 480
 ctgagcatgg ggggtgttcag ccaagtgact atgtatgact atcaggccat gtgcaaacc
 540
 tcgagtcacc accacagtgc agcccagccc ctggtcagcc caatttctgc cttcttgacg
 600
 gcgaccaggt ggctgctgca ggagctgggt ctgttcctgc tggagtggag tgtctggggc
 660
 tcctgggtacg acagaggggc cgaggccaaa agtgtcttcc atcactccca caaacacaag

1801.app

720

aagcaggacc cgctgcagcc ctgcgacacg gagtaccgcc tggttcgtgta ccagccggcc

780

atccgggagg ccaacgggat cgtggagtgc gggccctgcc agaaggtatt tgtgggtgcag

840

cagattccca acagtaacct cctcctcctg gtgacagacc ccacctgtga ctgcagcatc

900

ttcccaccag tgctgcagga ggcgacagaa gtcaaata atgcctctgt caaatgtgac

960

cggatgcgct cccagaagct ccgccggcga ccagactcct gccacgcctt ccatccagag

1020

gagaatgccc aggactgcgg cggcgccctcg

1050

<210> 16

<211> 304

<212> PRT

<213> Homo sapiens

<400> 16

Ser	Gly	Leu	Leu	Arg	Ser	Ser	Leu	Phe	Val	Gly	Ser	Glu	Lys	Val	Ser
1				5					10					15	

Asp	Arg	Lys	Phe	Leu	Thr	Pro	Glu	Asp	Glu	Ala	Ser	Val	Phe	Thr	Leu
			20					25					30		

Asp	Arg	Phe	Pro	Leu	Trp	Tyr	Arg	Gln	Ala	Ser	Glu	His	Pro	Ala	Gly
		35					40					45			

Ser	Phe	Val	Phe	Asn	Leu	Arg	Trp	Ala	Glu	Gly	Pro	Glu	Ser	Ala	Gly
	50					55					60				

Glu	Pro	Met	Val	Val	Thr	Ala	Ser	Thr	Ala	Val	Ala	Val	Thr	Val	Asp
65					70					75					80

Lys	Arg	Thr	Ala	Ile	Ala	Ala	Ala	Ala	Gly	Val	Gln	Met	Lys	Leu	Glu
				85					90					95	

Phe	Leu	Gln	Arg	Lys	Phe	Trp	Ala	Ala	Thr	Arg	Gln	Cys	Ser	Thr	Val
			100					105					110		

Asp	Gly	Pro	Cys	Thr	Gln	Ser	Cys	Glu	Asp	Ser	Asp	Leu	Asp	Cys	Phe
		115					120					125			

Val	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Ile	Ser	Lys	Arg	Ser	Arg	Glu
	130					135					140				

Thr	Gly	Arg	Phe	Leu	Gly	Glu	Val	Asp	Gly	Ala	Val	Leu	Thr	Gln	Leu
145					150					155					160

Leu	Ser	Met	Gly	Val	Phe	Ser	Gln	Val	Thr	Met	Tyr	Asp	Tyr	Gln	Ala
				165					170					175	

Met	Cys	Lys	Pro	Ser	Ser	His	His	His	Ser	Ala	Ala	Gln	Pro	Leu	Val
			180					185					190		

1801.app

Ser	Pro	Ile	Ser	Ala	Phe	Leu	Thr	Ala	Thr	Arg	Trp	Leu	Leu	Gln	Glu
		195					200					205			
Leu	Val	Leu	Phe	Leu	Leu	Glu	Trp	Ser	Val	Trp	Gly	Ser	Trp	Tyr	Asp
	210					215					220				
Arg	Gly	Ala	Glu	Ala	Lys	Ser	Val	Phe	His	His	Ser	His	Lys	His	Lys
225					230					235					240
Lys	Gln	Asp	Pro	Leu	Gln	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Val	Phe	Val
				245					250					255	
Tyr	Gln	Pro	Ala	Ile	Arg	Glu	Ala	Asn	Gly	Ile	Val	Glu	Cys	Gly	Pro
			260					265					270		
Cys	Gln	Lys	Val	Phe	Val	Val	Gln	Gln	Ile	Pro	Asn	Ser	Asn	Leu	Leu
		275					280					285			
Leu	Leu	Val	Thr	Asp	Pro	Thr	Cys	Asp	Cys	Ser	Ile	Phe	Pro	Pro	Val
	290					295					300				

<210> 17
 <211> 323
 <212> PRT
 <213> Homo sapiens

<400> 17

Ser	Gly	Leu	Leu	Arg	Ser	Ser	Leu	Phe	Val	Gly	Ser	Glu	Lys	Val	Ser
1				5					10					15	
Asp	Arg	Lys	Phe	Leu	Thr	Pro	Glu	Asp	Glu	Ala	Ser	Val	Phe	Thr	Leu
			20					25					30		
Asp	Arg	Phe	Pro	Leu	Trp	Tyr	Arg	Gln	Ala	Ser	Glu	His	Pro	Ala	Gly
		35					40					45			
Ser	Phe	Val	Phe	Asn	Leu	Arg	Trp	Ala	Glu	Gly	Pro	Glu	Ser	Ala	Gly
	50					55					60				
Glu	Pro	Met	Val	Val	Thr	Ala	Ser	Thr	Ala	Val	Ala	Val	Thr	Val	Asp
65					70					75					80
Lys	Arg	Thr	Ala	Ile	Ala	Ala	Ala	Ala	Gly	Val	Gln	Met	Lys	Leu	Glu
				85					90					95	
Phe	Leu	Gln	Arg	Lys	Phe	Trp	Ala	Ala	Thr	Arg	Gln	Cys	Ser	Thr	Val
			100					105					110		
Asp	Gly	Pro	Cys	Thr	Gln	Ser	Cys	Glu	Asp	Ser	Asp	Leu	Asp	Cys	Phe
		115					120					125			

1801.app

Val	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Ile	Ser	Lys	Arg	Ser	Arg	Glu
	130					135					140				
Thr	Gly	Arg	Phe	Leu	Gly	Glu	Val	Asp	Gly	Ala	Val	Leu	Thr	Gln	Leu
145					150					155					160
Leu	Ser	Met	Gly	Val	Phe	Ser	Gln	Val	Thr	Met	Tyr	Asp	Tyr	Gln	Ala
				165					170					175	
Met	Cys	Lys	Pro	Ser	Ser	His	His	His	Ser	Ala	Ala	Gln	Pro	Leu	Val
			180					185					190		
Ser	Pro	Ile	Ser	Ala	Phe	Leu	Thr	Ala	Thr	Arg	Trp	Leu	Leu	Gln	Glu
		195					200					205			
Leu	Val	Leu	Phe	Leu	Leu	Glu	Trp	Ser	Val	Trp	Gly	Ser	Trp	Tyr	Asp
	210					215					220				
Arg	Gly	Ala	Glu	Ala	Lys	Ser	Val	Phe	His	His	Ser	His	Lys	His	Lys
225					230					235					240
Lys	Gln	Asp	Pro	Leu	Gln	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Val	Phe	Val
				245					250					255	
Tyr	Gln	Pro	Ala	Ile	Arg	Glu	Ala	Asn	Gly	Ile	Val	Glu	Cys	Gly	Pro
			260					265					270		
Cys	Gln	Lys	Val	Phe	Val	Val	Gln	Gln	Ile	Pro	Asn	Ser	Asn	Leu	Leu
		275					280					285			
Leu	Leu	Val	Thr	Asp	Pro	Thr	Cys	Asp	Cys	Ser	Ile	Phe	Pro	Pro	Val
	290					295					300				
Leu	Gln	Glu	Ala	Thr	Glu	Val	Lys	Tyr	Asn	Ala	Ser	Val	Lys	Cys	Asp
305					310					315					320
Arg	Met	Arg													

<210> 18
 <211> 350
 <212> PRT
 <213> Homo sapiens

<400> 18
 Ser Gly Leu Leu Arg Ser Ser Leu Phe Val Gly Ser Glu Lys Val Ser
 1 5 10 15
 Asp Arg Lys Phe Leu Thr Pro Glu Asp Glu Ala Ser Val Phe Thr Leu
 20 25 30
 Asp Arg Phe Pro Leu Trp Tyr Arg Gln Ala Ser Glu His Pro Ala Gly
 35 40 45

1801.app

Ser	Phe	Val	Phe	Asn	Leu	Arg	Trp	Ala	Glu	Gly	Pro	Glu	Ser	Ala	Gly
	50					55					60				
Glu	Pro	Met	Val	Val	Thr	Ala	Ser	Thr	Ala	Val	Ala	Val	Thr	Val	Asp
65					70					75					80
Lys	Arg	Thr	Ala	Ile	Ala	Ala	Ala	Ala	Gly	Val	Gln	Met	Lys	Leu	Glu
				85					90					95	
Phe	Leu	Gln	Arg	Lys	Phe	Trp	Ala	Ala	Thr	Arg	Gln	Cys	Ser	Thr	Val
			100					105					110		
Asp	Gly	Pro	Cys	Thr	Gln	Ser	Cys	Glu	Asp	Ser	Asp	Leu	Asp	Cys	Phe
		115					120					125			
Val	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Ile	Ser	Lys	Arg	Ser	Arg	Glu
	130					135					140				
Thr	Gly	Arg	Phe	Leu	Gly	Glu	Val	Asp	Gly	Ala	Val	Leu	Thr	Gln	Leu
145					150					155					160
Leu	Ser	Met	Gly	Val	Phe	Ser	Gln	Val	Thr	Met	Tyr	Asp	Tyr	Gln	Ala
				165					170					175	
Met	Cys	Lys	Pro	Ser	Ser	His	His	His	Ser	Ala	Ala	Gln	Pro	Leu	Val
			180					185					190		
Ser	Pro	Ile	Ser	Ala	Phe	Leu	Thr	Ala	Thr	Arg	Trp	Leu	Leu	Gln	Glu
		195					200					205			
Leu	Val	Leu	Phe	Leu	Leu	Glu	Trp	Ser	Val	Trp	Gly	Ser	Trp	Tyr	Asp
	210					215					220				
Arg	Gly	Ala	Glu	Ala	Lys	Ser	Val	Phe	His	His	Ser	His	Lys	His	Lys
225					230					235					240
Lys	Gln	Asp	Pro	Leu	Gln	Pro	Cys	Asp	Thr	Glu	Tyr	Pro	Val	Phe	Val
				245					250					255	
Tyr	Gln	Pro	Ala	Ile	Arg	Glu	Ala	Asn	Gly	Ile	Val	Glu	Cys	Gly	Pro
			260					265					270		
Cys	Gln	Lys	Val	Phe	Val	Val	Gln	Gln	Ile	Pro	Asn	Ser	Asn	Leu	Leu
		275					280					285			
Leu	Leu	Val	Thr	Asp	Pro	Thr	Cys	Asp	Cys	Ser	Ile	Phe	Pro	Pro	Val
	290					295					300				
Leu	Gln	Glu	Ala	Thr	Glu	Val	Lys	Tyr	Asn	Ala	Ser	Val	Lys	Cys	Asp
305					310					315					320
Arg	Met	Arg	Ser	Gln	Lys	Leu	Arg	Arg	Arg	Pro	Asp	Ser	Cys	His	Ala
				325					330					335	
Phe	His	Pro	Glu	Glu	Asn	Ala	Gln	Asp	Cys	Gly	Gly	Ala	Ser		

<210> 19
<211> 5482
<212> DNA
<213> Homo sapiens

<400> 19
cgggcagcgc agccccgcaga ggcgctgcgg cccgtgcagc cccggaggcc cctcgcggag
60
aaggcggcgg cggaggagag gccgagttac cgccccgcgc ccgcgcccc ccaacccccgc
120
cgccgcccgc gcgcccgcga ctgccccccc tccccgcggc gccgcatctt gaatggaaac
180
atggcggtgc cggctcggac ctgcggcgcc tctcggcccc gcccagcgcg gactgcgcgc
240
ccctggcccc gctgcggccc ccaccctggc ccgggcaccc ggcgccccgac gtccggggccc
300
ccgcgccccg tgtggctgct gctgccgctt ctaccgctgc tcgcccgcgc cggcgccctct
360
gcctacagct tccccagca gcacacgatg cagcactggg cccggcgctct ggagcaggag
420
gtcgacggcg tgatgcggat ttttggaggc gtccagcagc tccgtgagat ttacaaggac
480
aaccggaacc tgttcgaggt acaggagaat gagcctcaga agttggtgga gaaggtggca
540
ggggacattg agagccttct ggacaggaag gtgcaggccc tgaagagact ggctgatgct
600
gcagagaact tccagaaagc acaccgctgg caggacaaca tcaaggagga agacatcgtg
660
tactatgacg ccaaggctga cgctgagctg gacgaccctg agagtgagga tgtggaaagg
720
gggtctaagg ccagcaccct aaggctggac ttcatcgagg acccaaactt caagaacaag
780
gtcaactatt catacgcggc tgtacagatc cctacggaca tctacaaagg ctccactgtc
840
atcctcaatg agctcaactg gacagaggcc ctggagaatg tgttcatgga aaaccgcaga
900
caagacccca cactgctgtg gcaggctctc ggcagcgcca caggagtcac tcgctactac
960
ccggccaccc cgtggcgagc cccaagaag atcgacctgt acgatgtccg aaggagaccc
1020
tggtatatcc agggggcctc gtcacccaaa gacatgggtca tcatcgtgga tgtgagtggc
1080
agtgtgagcg gcctgaccct gaagctgatg aagacatctg tctgcgagat gctggacacg
1140
ctgtctgatg atgactatgt gaatgtggcc tcgttcaacg agaaggcaca gcctgtgtca
1200
tgcttcacac acctggtgca ggccaatgtg cgcaacaaga aggtgttcaa ggaagctgtg
1260
cagggcatgg tggccaaggg caccacaggc tacaaggccg gctttgagta tgcctttgac
1320
cagctgcaga actccaacat cactcgggcc aactgcaaca agatgatcat gatgttcacg
1380

1801.app

gatggtggtg aggaccgcgt gcaggacgtc tttgagaagt acaattggcc aaaccggacg
1440
gtgcgcgtgt ttactttctc cgtggggcag cataactatg acgtcacacc gctgcagtgg
1500
atggcctgtg ccaacaaagg ctactatttt gagatccctt ccatcggagc catccgcata
1560
aacacacagg aatatctaga tgtgttgggc aggcccatgg tgctggcagg caaggaggcc
1620
aagcaggttc agtggaccaa cgtgtatgag gatgcactgg gactgggggtt ggtggtaaca
1680
gggaccctcc ctgttttcaa cctgacacag gatggccctg gggaaaagaa gaaccagctg
1740
atcctgggcg tgatgggcat tgacgtggct ctgaatgaca tcaagaggct gacccccaac
1800
tacacgcttg gagccaacgg ctatgtgttt gccattgacc tgaacggcta cgtgttgctg
1860
caccccaatc tcaagcccca gaccaccaac ttccgggagc ctgtgactct ggacttcctg
1920
gatgcggagc tagaggatga gaacaaggaa gagatccgtc ggagcatgat tgatggcaac
1980
aagggccaca agcagatcag aacgttggtc aagtccttgg atgagaggta catagatgag
2040
gtgacacgga actacacctg ggtgcctata aggagcacta actacagcct ggggctgggtg
2100
ctcccaccct acagcacctt ctacctcaa gccaatctca gtgaccagat cctgcaggtc
2160
aagtattttg agttcctgct ccccagcagc tttgagtctg aaggacacgt tttcattgct
2220
cccagagagt actgcaagga cctgaatgcc tcagacaaca acaccgagtt cctgaaaaac
2280
tttattgagc tcatggagaa agtgactcca gactccaagc agtgcaacaa cttccttctg
2340
cacaacctga tcttggacac gggcatcacg cagcagctgg tagagcgtgt gtggagggac
2400
caggatctca acacgtacag cctactggcc gtgttcgctg ccacagacgg tggcatcacc
2460
cgagtcttcc ccaacaaggc agctgaggac tggacagaga accctgagcc cttcaatgcc
2520
agcttctacc gccgcagcct ggataaccac ggttatgtct tcaagcccc acaccaggat
2580
gccctgttaa ggccgctgga gctggagaat gacactgtgg gcatacctcgt cagcacagct
2640
gtggagctca gcctaggcag gcgcacactg aggccagcag tgggtgggcgt caagctggac
2700
ctagaggctt gggctgagaa gttcaagggtg ctagccagca accgtacca ccaagaccag
2760
cctcagaagt gcggcccca cagccactgt gagatggact gcgagggtta caatgaggac
2820
ttactctgtg tcctcattga tgatggagga ttcttggtgc tgtcaaacca gaaccatcag
2880
tgggaccagg tgggcagggt cttcagtgag gtggatgcca acctgatgct ggcactctac
2940
aataactcct tctacacccg caaggagtcc tatgactatc aggcagcctg tgcccctcag
3000
ccccctggca acctgggtgc tgcaccccgg ggtgtctttg tgcccaccgt tgcagatttc
3060

1801.app

cttaacctgg cctggtggac ctctgctgcc gcctgggtccc tgttccagca gcttctctac
3120
ggcctcatct accacagctg gttccaagca gaccccgcgg aggccgaggg gagccccgag
3180
acgcgcgaga gcagctgcgt catgaaacag acccagtact acttcggctc ggtaaacgcc
3240
tcctacaacg ccatcatcga ctgcggaaac tgctccaggc tgttccacgc gcagagactg
3300
accaacacca atcttctctt tgtggtggcc gagaagccgc tgtgcagcca gtgcgaggct
3360
ggccgggctgc tgcagaagga gacgcactgc ccagcggacg gcccggagca gtgtgagcta
3420
gtgcagagac cgcgataccg gagaggcccc cacatctgct tcgactacaa cgcgacagaa
3480
gatacctcag actgtggccg cggggcctcc ttcccgcctg cgctgggctg cctggtctcc
3540
ctgcaactgc tgctcctcct gggcctgccg ccccggccgc agcctcaagt cctcgtccac
3600
gcctctcgcc gcctctgagc accctgcccc accccacctc cactcccacc tcacccggcc
3660
tcttcgcctt tcccaccctc ctgccccaca ctcccgcct tagagcctcg tccctccctc
3720
actgaaggac ctgagctggc caggccctga gagtctggtc tgccgcttgg gatggggagt
3780
cccaaagcgg gacgccgcag gtgtttggca ccaaatacac atctcacctc cgaactgttc
3840
aagtgtcccc agacccttct tgccctgctgg gctcccccca gtgggatggg acagggaggg
3900
cacacgcact ggtgccaaaa ccaggcctct gctgccgccc ttccctggagg ctgcctatgt
3960
tggggggggac cctgcctcag ctgaccgggc ctctctgccc cacccaagcc caaacttggt
4020
ttctgtgaga atagtggagg aaggtgagat ggccagtttg aagcctgtgc ctcccagctt
4080
aatccttagc aggagagagg ctctggggca gcccccatgg gctcctgccc ctttcaggcc
4140
tacagccaca tcccgaagcc caccagggtg caggatagtc acagtgatac cagttcagac
4200
actaccccat atacacctgg aacattgagg atggaaactg gactcacatt cgacataccc
4260
cactgggcac acgcacaaac acacacacta tgggggtgggg tgggtgtagg ggcttacaaa
4320
gccttacaca gggcgagggg ttggtgggag ggttggcacc tgcacactcc atctcctgct
4380
caccacctgc ctctaactct agctgcagcc tggctgggtc tcccatttct aaagctgaat
4440
gtcaaacagt gccaaatgct ggggcagggg gtgaagaacc ctctgtccca cccctagcca
4500
ccagtgtcct ccaagtgccc cctcacctct ccagggtgctc attgtaacca tttctcacta
4560
gtgtcaggcc cccagtggga ccacatgcca ctgcctgcac ctttcggcag aggaaccccc
4620
accagacatc accctttgcc ttagcagggg tgactttgtc tctcctggct gggccatcct
4680
tcgcgcaatc tggcccttac aactcagggc ctgtgcccac tccctatctc cttcccaccc
4740

1801.app

ctacacacac actccctgct tgcaggaggc caaactgtcc ctcccttgct gaacacacac
 4800
 acacacacac acacacaggt ggggactggg cacagctctt cacaccattc attctgggtca
 4860
 tttcccccaa aggcattccca gcctggggggc cagtgggggaa ctgaggggcaa ggggatatag
 4920
 tgatggggct cagatggact gggaggaggg ggagggtgat gcattaatta atggcttcgt
 4980
 taattaatgt catgttgctt gtcgctttct cagtgtgtgt gtgtgggtcca tgcccactgc
 5040
 tgggtgccagg gtgggtgtcc atgtgcaccc ggcctggatg ccagctgtgt ccttcggggg
 5100
 cgtgcgtgta actgtagtgt agtcagggtgc tcaatggaga atataaacat atacagaaaa
 5160
 atatatatatt taagtttaaa aaacagaaaa acagacaaaa caatccccat caggtagctg
 5220
 tctaaccccc agctgggtct aatccttctc attaccacc cgacctggct gccctcacc
 5280
 ttgggctggg ggactggggg gccatttcct tttctctgcc ctttttttgt tgttctattt
 5340
 tgtacagaca agttggaaaa acaacagcga caaaaaagtc aagaaacttt gtaaaatata
 5400
 gtgtgtgtga ttccttgtaa aatatattca aatgggttat tacagaagat cagttattaa
 5460
 ataatgttca tattttcact tc
 5482

<210> 20
 <211> 1145
 <212> PRT
 <213> Homo sapiens

<400> 20

Met	Ala	Val	Pro	Ala	Arg	Thr	Cys	Gly	Ala	Ser	Arg	Pro	Gly	Pro	Ala
1				5					10					15	
Arg	Thr	Ala	Arg	Pro	Trp	Pro	Gly	Cys	Gly	Pro	His	Pro	Gly	Pro	Gly
			20					25					30		
Thr	Arg	Arg	Pro	Thr	Ser	Gly	Pro	Pro	Arg	Pro	Leu	Trp	Leu	Leu	Leu
			35				40					45			
Pro	Leu	Leu	Pro	Leu	Leu	Ala	Ala	Pro	Gly	Ala	Ser	Ala	Tyr	Ser	Phe
		50				55					60				
Pro	Gln	Gln	His	Thr	Met	Gln	His	Trp	Ala	Arg	Arg	Leu	Glu	Gln	Glu
					70					75					80
Val	Asp	Gly	Val	Met	Arg	Ile	Phe	Gly	Gly	Val	Gln	Gln	Leu	Arg	Glu
				85					90					95	
Ile	Tyr	Lys	Asp	Asn	Arg	Asn	Leu	Phe	Glu	Val	Gln	Glu	Asn	Glu	Pro
			100					105					110		
Gln	Lys	Leu	Val	Glu	Lys	Val	Ala	Gly	Asp	Ile	Glu	Ser	Leu	Leu	Asp

1801.app															
115						120					125				
Arg	Lys	Val	Gln	Ala	Leu	Lys	Arg	Leu	Ala	Asp	Ala	Ala	Glu	Asn	Phe
	130					135					140				
Gln	Lys	Ala	His	Arg	Trp	Gln	Asp	Asn	Ile	Lys	Glu	Glu	Asp	Ile	Val
145					150					155					160
Tyr	Tyr	Asp	Ala	Lys	Ala	Asp	Ala	Glu	Leu	Asp	Asp	Pro	Glu	Ser	Glu
				165					170					175	
Asp	Val	Glu	Arg	Gly	Ser	Lys	Ala	Ser	Thr	Leu	Arg	Leu	Asp	Phe	Ile
			180					185					190		
Glu	Asp	Pro	Asn	Phe	Lys	Asn	Lys	Val	Asn	Tyr	Ser	Tyr	Ala	Ala	Val
		195					200					205			
Gln	Ile	Pro	Thr	Asp	Ile	Tyr	Lys	Gly	Ser	Thr	Val	Ile	Leu	Asn	Glu
	210					215					220				
Leu	Asn	Trp	Thr	Glu	Ala	Leu	Glu	Asn	Val	Phe	Met	Glu	Asn	Arg	Arg
225					230					235					240
Gln	Asp	Pro	Thr	Leu	Leu	Trp	Gln	Val	Phe	Gly	Ser	Ala	Thr	Gly	Val
				245					250					255	
Thr	Arg	Tyr	Tyr	Pro	Ala	Thr	Pro	Trp	Arg	Ala	Pro	Lys	Lys	Ile	Asp
			260					265					270		
Leu	Tyr	Asp	Val	Arg	Arg	Arg	Pro	Trp	Tyr	Ile	Gln	Gly	Ala	Ser	Ser
		275					280				285				
Pro	Lys	Asp	Met	Val	Ile	Ile	Val	Asp	Val	Ser	Gly	Ser	Val	Ser	Gly
	290					295					300				
Leu	Thr	Leu	Lys	Leu	Met	Lys	Thr	Ser	Val	Cys	Glu	Met	Leu	Asp	Thr
305					310					315					320
Leu	Ser	Asp	Asp	Asp	Tyr	Val	Asn	Val	Ala	Ser	Phe	Asn	Glu	Lys	Ala
				325					330					335	
Gln	Pro	Val	Ser	Cys	Phe	Thr	His	Leu	Val	Gln	Ala	Asn	Val	Arg	Asn
			340					345					350		
Lys	Lys	Val	Phe	Lys	Glu	Ala	Val	Gln	Gly	Met	Val	Ala	Lys	Gly	Thr
		355					360					365			
Thr	Gly	Tyr	Lys	Ala	Gly	Phe	Glu	Tyr	Ala	Phe	Asp	Gln	Leu	Gln	Asn
	370					375					380				
Ser	Asn	Ile	Thr	Arg	Ala	Asn	Cys	Asn	Lys	Met	Ile	Met	Met	Phe	Thr
385					390					395					400
Asp	Gly	Gly	Glu	Asp	Arg	Val	Gln	Asp	Val	Phe	Glu	Lys	Tyr	Asn	Trp
				405					410					415	

1801.app

Pro	Asn	Arg	Thr	Val	Arg	Val	Phe	Thr	Phe	Ser	Val	Gly	Gln	His	Asn	
			420					425					430			
Tyr	Asp	Val	Thr	Pro	Leu	Gln	Trp	Met	Ala	Cys	Ala	Asn	Lys	Gly	Tyr	
		435					440					445				
Tyr	Phe	Glu	Ile	Pro	Ser	Ile	Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu	
	450					455					460					
Tyr	Leu	Asp	Val	Leu	Gly	Arg	Pro	Met	Val	Leu	Ala	Gly	Lys	Glu	Ala	
465					470				475						480	
Lys	Gln	Val	Gln	Trp	Thr	Asn	Val	Tyr	Glu	Asp	Ala	Leu	Gly	Leu	Gly	
				485					490					495		
Leu	Val	Val	Thr	Gly	Thr	Leu	Pro	Val	Phe	Asn	Leu	Thr	Gln	Asp	Gly	
			500					505					510			
Pro	Gly	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Ile	Asp	
		515					520					525				
Val	Ala	Leu	Asn	Asp	Ile	Lys	Arg	Leu	Thr	Pro	Asn	Tyr	Thr	Leu	Gly	
	530					535					540					
Ala	Asn	Gly	Tyr	Val	Phe	Ala	Ile	Asp	Leu	Asn	Gly	Tyr	Val	Leu	Leu	
545					550					555					560	
His	Pro	Asn	Leu	Lys	Pro	Gln	Thr	Thr	Asn	Phe	Arg	Glu	Pro	Val	Thr	
				565					570					575		
Leu	Asp	Phe	Leu	Asp	Ala	Glu	Leu	Glu	Asp	Glu	Asn	Lys	Glu	Glu	Ile	
			580					585					590			
Arg	Arg	Ser	Met	Ile	Asp	Gly	Asn	Lys	Gly	His	Lys	Gln	Ile	Arg	Thr	
		595					600					605				
Leu	Val	Lys	Ser	Leu	Asp	Glu	Arg	Tyr	Ile	Asp	Glu	Val	Thr	Arg	Asn	
	610					615					620					
Tyr	Thr	Trp	Val	Pro	Ile	Arg	Ser	Thr	Asn	Tyr	Ser	Leu	Gly	Leu	Val	
625					630					635					640	
Leu	Pro	Pro	Tyr	Ser	Thr	Phe	Tyr	Leu	Gln	Ala	Asn	Leu	Ser	Asp	Gln	
				645					650					655		
Ile	Leu	Gln	Val	Lys	Tyr	Phe	Glu	Phe	Leu	Leu	Pro	Ser	Ser	Phe	Glu	
			660					665					670			
Ser	Glu	Gly	His	Val	Phe	Ile	Ala	Pro	Arg	Glu	Tyr	Cys	Lys	Asp	Leu	
		675					680					685				
Asn	Ala	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Lys	Asn	Phe	Ile	Glu	Leu	
	690					695					700					
Met	Glu	Lys	Val	Thr	Pro	Asp	Ser	Lys	Gln	Cys	Asn	Asn	Phe	Leu	Leu	
705					710					715					720	

1801.app

His	Asn	Leu	Ile	Leu	Asp	Thr	Gly	Ile	Thr	Gln	Gln	Leu	Val	Glu	Arg
				725					730					735	
Val	Trp	Arg	Asp	Gln	Asp	Leu	Asn	Thr	Tyr	Ser	Leu	Leu	Ala	Val	Phe
			740					745					750		
Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	
Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn
	930					935					940				
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960
Leu	Asn	Leu	Ala	Trp	Trp	Thr	Ser	Ala	Ala	Ala	Trp	Ser	Leu	Phe	Gln
				965					970					975	
Gln	Leu	Leu	Tyr	Gly	Leu	Ile	Tyr	His	Ser	Trp	Phe	Gln	Ala	Asp	Pro
			980					985					990		
Ala	Glu	Ala	Glu	Gly	Ser	Pro	Glu	Thr	Arg	Glu	Ser	Ser	Cys	Val	Met
		995					1000					1005			
Lys	Gln	Thr	Gln	Tyr	Tyr	Phe	Gly	Ser	Val	Asn	Ala	Ser	Tyr	Asn	Ala

1020

Val Leu Val His Ala Ser Arg Arg Leu
1140 1145

```
<210> 21
<211> 3770
<212> DNA
<213> Homo sapiens
```

<400> 21					
tactataggg	cggcccgcgaa	ttcgggcacga	ggcgggcgcgg	agcggagcag	gcagccccgc
60					
gcgctcgccc	accgcccgct	ccgcgcagct	ccccgcggcc	gctctcgtcg	ccgccgcagc
120					
gggcgcgctcg	gagggagccc	agcatggccg	ggccggggctc	gccgcgccgc	gcgtcccggg
180					
gggcctcggc	gcttctcgct	gccgcgcttc	tctacgccgc	gctggggggac	gtggtgcgct
240					
cggagcagca	gataccgctc	tccgtgggtga	agctctgggc	ctcggctttt	ggtggggaga
300					
taaaatccat	tgctgctaag	tactccggtt	cccagcttct	gcaaaagaaa	tacaaagagt
360					
atgagaaaga	cgttgccata	gaagaaattg	atggcctcca	actggtaaag	aagctggcaa
420					
agaacatgga	agagatgttt	cacaagaagt	ctgaggccgt	caggcgtctg	gtggaggctg
480					
cagaagaagc	acacctgaaa	catgaatttg	atgcagactt	acagtatgaa	tacttcaatg
540					
ctgtgctgat	aaatgaaagg	gacaaagacg	ggaatttttt	ggagctggga	aaggaattca
600					
tcttagcccc	aaatgaccat	tttaataatt	tgccctgtgaa	catcagtcta	agtgacgtcc
660					

1801.app

aagtaccaac gaacatgtac aacaaagacc ctgcaattgt caatgggggtt tattgggtctg
720
aatctctaaa caaagttttt gtagataact ttgaccgtga cccatctctc atatgggcagt
780
actttggaag tgcaaagggc ttttttaggc agtatccggg gattaaatgg gaaccagatg
840
agaatggagt cattgccttc gactgcagga accgaaaatg gtacatccag gcagcaactt
900
ctccgaaaga cgtgggtcatt ttagttgacg tcagtggcag catgaaagga ctccgtctga
960
ctatcgcgaa gcaaacagtc tcatccattt tggatacact tggggatgat gacttcttca
1020
acataattgc ttataatgag gagcttcact atgtggaacc ttgcctgaat ggaactttgg
1080
tgcaagccga caggacaaac aaagagcact tcagggagca tctggacaaa cttttcgcca
1140
aaggaattgg aatgttggat atagctctga atgaggcctt caacattctg agtgatttca
1200
accacacggg acaaggaagt atctgcagtc aggccatcat gctcataact gatggggcg
1260
tggacaccta tgatacaatc tttgcaaaat acaattggcc agatcgaaag gttegcacatc
1320
tcacatacct cattggacga gaggctgcgt ttgcagacaa tctaaagtgg atggcctgtg
1380
ccaacaaagg attttttacc cagatctcca ccttggctga tgtgcaggag aatgtcatgg
1440
aataccttca cgtgcttagc cggcccaaag tcatcgacca ggagcatgat gtggtgtgga
1500
ccgaagctta cattgacagc actctgactg atgatcaggg ccccgctctg atgaccactg
1560
tagccatgcc tgtgttttagt aagcagaacg aaaccagatc gaagggcatt cttctgggag
1620
tggttggcac agatgtccca gtgaaagaac ttctgaagac catccccaaa tacaagttag
1680
ggattcacgg ttatgccttt gcaatcacia ataatggrra tatcctgacg catccggaac
1740
tcaggctgct gtacgaagaa ggaaaaaagc gaaggaaacc taactatagt agcgttgacc
1800
tctctgaggt ggagtgggaa gaccgagatg acgtgttgag aaatgctatg gtgaatcgaa
1860
agacggggaa gttttccatg gaggtgaaga agacagtgga caaagggaaa cgggttttgg
1920
tgatgacaaa tgactactat tatacagaca tcaaggggtac tcctttcagt ttaggtgtgg
1980
cgctttccag aggtcatggg aaatatattct tccgagggaa tgtaaccatc gaagaaggcc
2040
tgcattgactt agaacatccc gatgtgtcct tggcagatga atggtcctac tgcaacactg
2100
acctacaccc tgagcaccgc catctgtctc agttagaagc gattaagctc tacctaaaag
2160
gcaaagaacc tctgctccag tgtgataaag aattgatcca agaagtcctt tttgacgcgg
2220
tggtgagtgc cccattgaa gcgtattgga ccagcctggc cctcaacaaa tctgaaaatt
2280
ctgacaaggg cgtggagggt gccttcctcg gcactcgac gggcctctcc agaatacaac
2340

1801.app

tgtttgtcgg ggctgagcag ctcaccaatc aggacttcct gaaagctggc gacaaggaga
2400
acatttttaa cgcagaccat ttccctctct ggtaccgaag agccgctgag cagattccag
2460
ggagcttcgt ctactcgatc ccattcagca ctggaccagt caataaaagc aatgtggtga
2520
cagcaagtac atccatccag ctccctggatg aacggaaatc tcctgtggtg gcagctgtag
2580
gcattcagat gaaacttgaa tttttccaaa ggaagttctg gactgccagc agacagtgtg
2640
cttccctgga tggcaaattgc tccatcagct gtgatgatga gactgtgaat tgttacctca
2700
tagacaataa tggatttatt ttggtgtctg aagactacac acagactgga gacttttttg
2760
gtgagatcga gggagctgtg atgaacaaat tgctaacaat gggctccttt aaaagaatta
2820
ccctttatga ctaccaagcc atgtgtagag ccaacaagga aagcagcgat ggcgcccattg
2880
gcctcctgga tccttataat gccttcctct ctgcagtaaa atggatcatg acagaacttg
2940
tcttgttcct ggtggaattt aacctctgca gttggtggca ctccgatatg acagctaaag
3000
cccagaaatt gaaacagacc ctggagcctt gtgatactga atatccagca ttcgtctctg
3060
agcgcaccat caaggagact acaggggaata ttgcttgtga agactgctcc aagtcctttg
3120
tcatccagca aatcccaagc agcaacctgt tcatgggtggg ggtggacagc agctgcctct
3180
gtgaatctgt ggcccccatc accatggcac ccattgaaat caggtataat gaatccctta
3240
agtgtgaacg tctaaaggcc cagaagatca gaaggcgccc agaattcttg catggcttcc
3300
atcctgagga gaatgcaagg gagtgtgggg gtgcgcccag tctccaagcc cagacagtcc
3360
tccttctgct ccctctgctt ttgatgctct tctcaagggtg aactgactg agatgttctc
3420
ttactgactg agatgttctc ttggcatgct aaatcatgga taaactgtga accaaaatat
3480
ggtgcaacat acgagacatg aatatagtcc aaccatcagc atctcatcat gatttttaac
3540
tgtgcgtgat ataaactctt aaagatatgt tgacaaaaag ttatctatca tctttttact
3600
ttgccagtca tgcaaatgtg agtttgccac atgataatca cccttcatca gaaatgggac
3660
cgcaagtggg aggcagtgtc ccttctgctt gaaacctatt gaaaccaatt taaaactgtg
3720
tactttttta ataaagtata ttaaaatcat aaaaaaaaaa aaaaaaaaaa
3770

<210> 22
<211> 1085
<212> PRT
<213> Homo sapiens

<400> 22

1801.app

Met	Ala	Gly	Pro	Gly	Ser	Pro	Arg	Arg	Ala	Ser	Arg	Gly	Ala	Ser	Ala
1				5					10					15	
Leu	Leu	Ala	Ala	Ala	Leu	Leu	Tyr	Ala	Ala	Leu	Gly	Asp	Val	Val	Arg
			20					25					30		
Ser	Glu	Gln	Gln	Ile	Pro	Leu	Ser	Val	Val	Lys	Leu	Trp	Ala	Ser	Ala
		35					40					45			
Phe	Gly	Gly	Glu	Ile	Lys	Ser	Ile	Ala	Ala	Lys	Tyr	Ser	Gly	Ser	Gln
	50					55					60				
Leu	Leu	Gln	Lys	Lys	Tyr	Lys	Glu	Tyr	Glu	Lys	Asp	Val	Ala	Ile	Glu
65					70					75					80
Glu	Ile	Asp	Gly	Leu	Gln	Leu	Val	Lys	Lys	Leu	Ala	Lys	Asn	Met	Glu
				85					90					95	
Glu	Met	Phe	His	Lys	Lys	Ser	Glu	Ala	Val	Arg	Arg	Leu	Val	Glu	Ala
			100					105					110		
Ala	Glu	Glu	Ala	His	Leu	Lys	His	Glu	Phe	Asp	Ala	Asp	Leu	Gln	Tyr
		115					120					125			
Glu	Tyr	Phe	Asn	Ala	Val	Leu	Ile	Asn	Glu	Arg	Asp	Lys	Asp	Gly	Asn
	130					135					140				
Phe	Leu	Glu	Leu	Gly	Lys	Glu	Phe	Ile	Leu	Ala	Pro	Asn	Asp	His	Phe
145					150					155					160
Asn	Asn	Leu	Pro	Val	Asn	Ile	Ser	Leu	Ser	Asp	Val	Gln	Val	Pro	Thr
				165					170					175	
Asn	Met	Tyr	Asn	Lys	Asp	Pro	Ala	Ile	Val	Asn	Gly	Val	Tyr	Trp	Ser
			180					185					190		
Glu	Ser	Leu	Asn	Lys	Val	Phe	Val	Asp	Asn	Phe	Asp	Arg	Asp	Pro	Ser
		195					200					205			
Leu	Ile	Trp	Gln	Tyr	Phe	Gly	Ser	Ala	Lys	Gly	Phe	Phe	Arg	Gln	Tyr
	210					215					220				
Pro	Gly	Ile	Lys	Trp	Glu	Pro	Asp	Glu	Asn	Gly	Val	Ile	Ala	Phe	Asp
225					230					235					240
Cys	Arg	Asn	Arg	Lys	Trp	Tyr	Ile	Gln	Ala	Ala	Thr	Ser	Pro	Lys	Asp
				245					250					255	
Val	Val	Ile	Leu	Val	Asp	Val	Ser	Gly	Ser	Met	Lys	Gly	Leu	Arg	Leu
			260					265					270		
Thr	Ile	Ala	Lys	Gln	Thr	Val	Ser	Ser	Ile	Leu	Asp	Thr	Leu	Gly	Asp
		275					280					285			
Asp	Asp	Phe	Phe	Asn	Ile	Ile	Ala	Tyr	Asn	Glu	Glu	Leu	His	Tyr	Val
	290					295					300				

1801.app

Glu 305	Pro	Cys	Leu	Asn	Gly 310	Thr	Leu	Val	Gln	Ala 315	Asp	Arg	Thr	Asn	Lys 320
Glu	His	Phe	Arg	Glu 325	His	Leu	Asp	Lys	Leu 330	Phe	Ala	Lys	Gly	Ile 335	Gly
Met	Leu	Asp	Ile 340	Ala	Leu	Asn	Glu	Ala 345	Phe	Asn	Ile	Leu	Ser 350	Asp	Phe
Asn	His	Thr 355	Gly	Gln	Gly	Ser	Ile 360	Cys	Ser	Gln	Ala	Ile 365	Met	Leu	Ile
Thr	Asp 370	Gly	Ala	Val	Asp	Thr 375	Tyr	Asp	Thr	Ile	Phe 380	Ala	Lys	Tyr	Asn
Trp 385	Pro	Asp	Arg	Lys	Val 390	Arg	Ile	Phe	Thr	Tyr 395	Leu	Ile	Gly	Arg	Glu 400
Ala	Ala	Phe	Ala	Asp 405	Asn	Leu	Lys	Trp	Met 410	Ala	Cys	Ala	Asn	Lys 415	Gly
Phe	Phe	Thr	Gln 420	Ile	Ser	Thr	Leu	Ala 425	Asp	Val	Gln	Glu	Asn 430	Val	Met
Glu	Tyr	Leu 435	His	Val	Leu	Ser	Arg 440	Pro	Lys	Val	Ile	Asp 445	Gln	Glu	His
Asp	Val 450	Val	Trp	Thr	Glu	Ala 455	Tyr	Ile	Asp	Ser	Thr 460	Leu	Thr	Asp	Asp
Gln 465	Gly	Pro	Val	Leu	Met 470	Thr	Thr	Val	Ala	Met 475	Pro	Val	Phe	Ser	Lys 480
Gln	Asn	Glu	Thr	Arg 485	Ser	Lys	Gly	Ile	Leu 490	Leu	Gly	Val	Val	Gly 495	Thr
Asp	Val	Pro	Val 500	Lys	Glu	Leu	Leu	Lys 505	Thr	Ile	Pro	Lys	Tyr 510	Lys	Leu
Gly	Ile	His 515	Gly	Tyr	Ala	Phe	Ala 520	Ile	Thr	Asn	Asn	Gly 525	Tyr	Ile	Leu
Thr	His 530	Pro	Glu	Leu	Arg	Leu 535	Leu	Tyr	Glu	Glu	Gly 540	Lys	Lys	Arg	Arg
Lys 545	Pro	Asn	Tyr	Ser	Ser 550	Val	Asp	Leu	Ser	Glu 555	Val	Glu	Trp	Glu	Asp 560
Arg	Asp	Asp	Val	Leu 565	Arg	Asn	Ala	Met	Val 570	Asn	Arg	Lys	Thr	Gly 575	Lys
Phe	Ser	Met	Glu 580	Val	Lys	Lys	Thr	Val 585	Asp	Lys	Gly	Lys	Arg	Val	Leu
Val	Met	Thr	Asn	Asp	Tyr	Tyr	Tyr	Thr	Asp	Ile	Lys	Gly	Thr	Pro	Phe

595					600					605					
Ser	Leu	Gly	Val	Ala	Leu	Ser	Arg	Gly	His	Gly	Lys	Tyr	Phe	Phe	Arg
	610					615					620				
Gly	Asn	Val	Thr	Ile	Glu	Glu	Gly	Leu	His	Asp	Leu	Glu	His	Pro	Asp
625					630					635					640
Val	Ser	Leu	Ala	Asp	Glu	Trp	Ser	Tyr	Cys	Asn	Thr	Asp	Leu	His	Pro
				645					650					655	
Glu	His	Arg	His	Leu	Ser	Gln	Leu	Glu	Ala	Ile	Lys	Leu	Tyr	Leu	Lys
			660					665					670		
Gly	Lys	Glu	Pro	Leu	Leu	Gln	Cys	Asp	Lys	Glu	Leu	Ile	Gln	Glu	Val
		675					680					685			
Leu	Phe	Asp	Ala	Val	Val	Ser	Ala	Pro	Ile	Glu	Ala	Tyr	Trp	Thr	Ser
	690					695					700				
Leu	Ala	Leu	Asn	Lys	Ser	Glu	Asn	Ser	Asp	Lys	Gly	Val	Glu	Val	Ala
705					710					715					720
Phe	Leu	Gly	Thr	Arg	Thr	Gly	Leu	Ser	Arg	Ile	Asn	Leu	Phe	Val	Gly
				725					730					735	
Ala	Glu	Gln	Leu	Thr	Asn	Gln	Asp	Phe	Leu	Lys	Ala	Gly	Asp	Lys	Glu
			740				745						750		
Asn	Ile	Phe	Asn	Ala	Asp	His	Phe	Pro	Leu	Trp	Tyr	Arg	Arg	Ala	Ala
		755					760					765			
Glu	Gln	Ile	Pro	Gly	Ser	Phe	Val	Tyr	Ser	Ile	Pro	Phe	Ser	Thr	Gly
	770					775					780				
Pro	Val	Asn	Lys	Ser	Asn	Val	Val	Thr	Ala	Ser	Thr	Ser	Ile	Gln	Leu
785					790					795					800
Leu	Asp	Glu	Arg	Lys	Ser	Pro	Val	Val	Ala	Ala	Val	Gly	Ile	Gln	Met
				805					810					815	
Lys	Leu	Glu	Phe	Phe	Gln	Arg	Lys	Phe	Trp	Thr	Ala	Ser	Arg	Gln	Cys
			820					825					830		
Ala	Ser	Leu	Asp	Gly	Lys	Cys	Ser	Ile	Ser	Cys	Asp	Asp	Glu	Thr	Val
		835					840					845			
Asn	Cys	Tyr	Leu	Ile	Asp	Asn	Asn	Gly	Phe	Ile	Leu	Val	Ser	Glu	Asp
	850					855					860				
Tyr	Thr	Gln	Thr	Gly	Asp	Phe	Phe	Gly	Glu	Ile	Glu	Gly	Ala	Val	Met
865					870					875					880
Asn	Lys	Leu	Leu	Thr	Met	Gly	Ser	Phe	Lys	Arg	Ile	Thr	Leu	Tyr	Asp
				885					890					895	

1801.app

Tyr Gln Ala Met Cys Arg Ala Asn Lys Glu Ser Ser Asp Gly Ala His
 900 905 910
 Gly Leu Leu Asp Pro Tyr Asn Ala Phe Leu Ser Ala Val Lys Trp Ile
 915 920 925
 Met Thr Glu Leu Val Leu Phe Leu Val Glu Phe Asn Leu Cys Ser Trp
 930 935 940
 Trp His Ser Asp Met Thr Ala Lys Ala Gln Lys Leu Lys Gln Thr Leu
 945 950 955 960
 Glu Pro Cys Asp Thr Glu Tyr Pro Ala Phe Val Ser Glu Arg Thr Ile
 965 970 975
 Lys Glu Thr Thr Gly Asn Ile Ala Cys Glu Asp Cys Ser Lys Ser Phe
 980 985 990
 Val Ile Gln Gln Ile Pro Ser Ser Asn Leu Phe Met Val Val Val Asp
 995 1000 1005
 Ser Ser Cys Leu Cys Glu Ser Val Ala Pro Ile Thr Met Ala Pro Ile
 1010 1015 1020
 Glu Ile Arg Tyr Asn Glu Ser Leu Lys Cys Glu Arg Leu Lys Ala Gln
 1025 1030 1035 1040
 Lys Ile Arg Arg Arg Pro Glu Ser Cys His Gly Phe His Pro Glu Glu
 1045 1050 1055
 Asn Ala Arg Glu Cys Gly Gly Ala Pro Ser Leu Gln Ala Gln Thr Val
 1060 1065 1070
 Leu Leu Leu Leu Pro Leu Leu Leu Met Leu Phe Ser Arg
 1075 1080 1085

<210> 23
 <211> 1115
 <212> PRT
 <213> Homo sapiens

<400> 23

Met Ala Val Pro Ala Arg Thr Cys Gly Ala Ser Arg Pro Gly Pro Ala
 1 5 10 15
 Arg Thr Ala Arg Pro Trp Pro Gly Cys Gly Pro His Pro Gly Pro Gly
 20 25 30
 Thr Arg Arg Pro Thr Ser Gly Pro Pro Arg Pro Leu Trp Leu Leu Leu
 35 40 45
 Pro Leu Leu Pro Leu Leu Ala Ala Pro Gly Ala Ser Ala Tyr Ser Phe
 50 55 60

1801.app

Pro 65	Gln	Gln	His	Thr	Met 70	Gln	His	Trp	Ala	Arg 75	Arg	Leu	Glu	Gln	Glu 80
Val	Asp	Gly	Val	Met 85	Arg	Ile	Phe	Gly	Gly 90	Val	Gln	Gln	Leu	Arg 95	Glu
Ile	Tyr	Lys	Asp 100	Asn	Arg	Asn	Leu	Phe 105	Glu	Val	Gln	Glu	Asn 110	Glu	Pro
Gln	Lys	Leu 115	Val	Glu	Lys	Val	Ala 120	Gly	Asp	Ile	Glu	Ser 125	Leu	Leu	Asp
Arg	Lys 130	Val	Gln	Ala	Leu	Lys 135	Arg	Leu	Ala	Asp	Ala 140	Ala	Glu	Asn	Phe
Gln 145	Lys	Ala	His	Arg	Trp 150	Gln	Asp	Asn	Ile	Lys 155	Glu	Glu	Asp	Ile	Val 160
Tyr	Tyr	Asp	Ala	Lys 165	Ala	Asp	Ala	Glu	Leu 170	Asp	Asp	Pro	Glu	Ser 175	Glu
Asp	Val	Glu	Arg 180	Gly	Ser	Lys	Ala	Ser 185	Thr	Leu	Arg	Leu	Asp 190	Phe	Ile
Glu	Asp	Pro 195	Asn	Phe	Lys	Asn	Lys 200	Val	Asn	Tyr	Ser	Tyr 205	Ala	Ala	Val
Gln	Ile 210	Pro	Thr	Asp	Ile	Tyr 215	Lys	Gly	Ser	Thr	Val 220	Ile	Leu	Asn	Glu
Leu 225	Asn	Trp	Thr	Glu	Ala 230	Leu	Glu	Asn	Val	Phe 235	Met	Glu	Asn	Arg	Arg 240
Gln	Asp	Pro	Thr	Leu 245	Leu	Trp	Gln	Val	Phe 250	Gly	Ser	Ala	Thr	Gly 255	Val
Thr	Arg	Tyr	Tyr 260	Pro	Ala	Thr	Pro	Trp 265	Arg	Ala	Pro	Lys	Lys 270	Ile	Asp
Leu	Tyr	Asp 275	Val	Arg	Arg	Arg	Pro 280	Trp	Tyr	Ile	Gln	Gly 285	Ala	Ser	Ser
Pro	Lys 290	Asp	Met	Val	Ile	Ile 295	Val	Asp	Val	Ser	Gly 300	Ser	Val	Ser	Gly
Leu 305	Thr	Leu	Lys	Leu	Met 310	Lys	Thr	Ser	Val	Cys 315	Glu	Met	Leu	Asp	Thr 320
Leu	Ser	Asp	Asp	Asp 325	Tyr	Val	Asn	Val	Ala 330	Ser	Phe	Asn	Glu	Lys 335	Ala
Gln	Pro	Val	Ser 340	Cys	Phe	Thr	His	Leu 345	Val	Gln	Ala	Asn	Val 350	Arg	Asn
Lys	Lys	Val 355	Phe	Lys	Glu	Ala	Val 360	Gln	Gly	Met	Val	Ala 365	Lys	Gly	Thr

1801.app

Thr	Gly	Tyr	Lys	Ala	Gly	Phe	Glu	Tyr	Ala	Phe	Asp	Gln	Leu	Gln	Asn
	370					375					380				
Ser	Asn	Ile	Thr	Arg	Ala	Asn	Cys	Asn	Lys	Met	Ile	Met	Met	Phe	Thr
385					390					395					400
Asp	Gly	Gly	Glu	Asp	Arg	Val	Gln	Asp	Val	Phe	Glu	Lys	Tyr	Asn	Trp
				405					410					415	
Pro	Asn	Arg	Thr	Val	Arg	Val	Phe	Thr	Phe	Ser	Val	Gly	Gln	His	Asn
			420					425					430		
Tyr	Asp	Val	Thr	Pro	Leu	Gln	Trp	Met	Ala	Cys	Ala	Asn	Lys	Gly	Tyr
		435					440					445			
Tyr	Phe	Glu	Ile	Pro	Ser	Ile	Gly	Ala	Ile	Arg	Ile	Asn	Thr	Gln	Glu
	450					455					460				
Tyr	Leu	Asp	Val	Leu	Gly	Arg	Pro	Met	Val	Leu	Ala	Gly	Lys	Glu	Ala
465					470					475					480
Lys	Gln	Val	Gln	Trp	Thr	Asn	Val	Tyr	Glu	Asp	Ala	Leu	Gly	Leu	Gly
				485					490					495	
Leu	Val	Val	Thr	Gly	Thr	Leu	Pro	Val	Phe	Asn	Leu	Thr	Gln	Asp	Gly
			500					505					510		
Pro	Gly	Glu	Lys	Lys	Asn	Gln	Leu	Ile	Leu	Gly	Val	Met	Gly	Ile	Asp
		515					520					525			
Val	Ala	Leu	Asn	Asp	Ile	Lys	Arg	Leu	Thr	Pro	Asn	Tyr	Thr	Leu	Gly
	530					535					540				
Ala	Asn	Gly	Tyr	Val	Phe	Ala	Ile	Asp	Leu	Asn	Gly	Tyr	Val	Leu	Leu
545					550					555					560
His	Pro	Asn	Leu	Lys	Pro	Gln	Thr	Thr	Asn	Phe	Arg	Glu	Pro	Val	Thr
				565					570					575	
Leu	Asp	Phe	Leu	Asp	Ala	Glu	Leu	Glu	Asp	Glu	Asn	Lys	Glu	Glu	Ile
			580					585					590		
Arg	Arg	Ser	Met	Ile	Asp	Gly	Asn	Lys	Gly	His	Lys	Gln	Ile	Arg	Thr
		595					600					605			
Leu	Val	Lys	Ser	Leu	Asp	Glu	Arg	Tyr	Ile	Asp	Glu	Val	Thr	Arg	Asn
	610					615					620				
Tyr	Thr	Trp	Val	Pro	Ile	Arg	Ser	Thr	Asn	Tyr	Ser	Leu	Gly	Leu	Val
625					630					635					640
Leu	Pro	Pro	Tyr	Ser	Thr	Phe	Tyr	Leu	Gln	Ala	Asn	Leu	Ser	Asp	Gln
				645					650					655	
Ile	Leu	Gln	Val	Lys	Tyr	Phe	Glu	Phe	Leu	Leu	Pro	Ser	Ser	Phe	Glu

Ser	Glu	Gly	His	Val	Phe	Ile	Ala	Pro	Arg	Glu	Tyr	Cys	Lys	Asp	Leu
		675					680					685			
Asn	Ala	Ser	Asp	Asn	Asn	Thr	Glu	Phe	Leu	Lys	Asn	Phe	Ile	Glu	Leu
	690					695					700				
Met	Glu	Lys	Val	Thr	Pro	Asp	Ser	Lys	Gln	Cys	Asn	Asn	Phe	Leu	Leu
705					710					715					720
His	Asn	Leu	Ile	Leu	Asp	Thr	Gly	Ile	Thr	Gln	Gln	Leu	Val	Glu	Arg
				725					730					735	
Val	Trp	Arg	Asp	Gln	Asp	Leu	Asn	Thr	Tyr	Ser	Leu	Leu	Ala	Val	Phe
			740					745					750		
Ala	Ala	Thr	Asp	Gly	Gly	Ile	Thr	Arg	Val	Phe	Pro	Asn	Lys	Ala	Ala
		755					760					765			
Glu	Asp	Trp	Thr	Glu	Asn	Pro	Glu	Pro	Phe	Asn	Ala	Ser	Phe	Tyr	Arg
	770					775					780				
Arg	Ser	Leu	Asp	Asn	His	Gly	Tyr	Val	Phe	Lys	Pro	Pro	His	Gln	Asp
785					790					795					800
Ala	Leu	Leu	Arg	Pro	Leu	Glu	Leu	Glu	Asn	Asp	Thr	Val	Gly	Ile	Leu
				805					810					815	
Val	Ser	Thr	Ala	Val	Glu	Leu	Ser	Leu	Gly	Arg	Arg	Thr	Leu	Arg	Pro
			820					825					830		
Ala	Val	Val	Gly	Val	Lys	Leu	Asp	Leu	Glu	Ala	Trp	Ala	Glu	Lys	Phe
		835					840					845			
Lys	Val	Leu	Ala	Ser	Asn	Arg	Thr	His	Gln	Asp	Gln	Pro	Gln	Lys	Cys
	850					855					860				
Gly	Pro	Asn	Ser	His	Cys	Glu	Met	Asp	Cys	Glu	Val	Asn	Asn	Glu	Asp
865					870					875					880
Leu	Leu	Cys	Val	Leu	Ile	Asp	Asp	Gly	Gly	Phe	Leu	Val	Leu	Ser	Asn
				885					890					895	
Gln	Asn	His	Gln	Trp	Asp	Gln	Val	Gly	Arg	Phe	Phe	Ser	Glu	Val	Asp
			900					905					910		
Ala	Asn	Leu	Met	Leu	Ala	Leu	Tyr	Asn	Asn	Ser	Phe	Tyr	Thr	Arg	Lys
		915					920					925			
Glu	Ser	Tyr	Asp	Tyr	Gln	Ala	Ala	Cys	Ala	Pro	Gln	Pro	Pro	Gly	Asn
	930					935					940				
Leu	Gly	Ala	Ala	Pro	Arg	Gly	Val	Phe	Val	Pro	Thr	Val	Ala	Asp	Phe
945					950					955					960

1801.app

Leu Asn Leu Ala Trp Trp Thr Ser Ala Ala Ala Trp Ser Leu Phe Gln
 965 970 975
 Gln Leu Leu Tyr Gly Leu Ile Tyr His Ser Trp Phe Gln Ala Asp Pro
 980 985 990
 Ala Glu Ala Glu Gly Ser Pro Glu Thr Arg Glu Ser Ser Cys Val Met
 995 1000 1005
 Lys Gln Thr Gln Tyr Tyr Phe Gly Ser Val Asn Ala Ser Tyr Asn Ala
 1010 1015 1020
 Ile Ile Asp Cys Gly Asn Cys Ser Arg Leu Phe His Ala Gln Arg Leu
 1025 1030 1035 1040
 Thr Asn Thr Asn Leu Leu Phe Val Val Ala Glu Lys Pro Leu Cys Ser
 1045 1050 1055
 Gln Cys Glu Ala Gly Arg Leu Leu Gln Lys Glu Thr His Cys Pro Ala
 1060 1065 1070
 Asp Gly Pro Glu Gln Cys Glu Leu Val Gln Arg Pro Arg Tyr Arg Arg
 1075 1080 1085
 Gly Pro His Ile Cys Phe Asp Tyr Asn Ala Thr Glu Asp Thr Ser Asp
 1090 1095 1100
 Cys Gly Arg Gly Ala His His His His His His
 1105 1110 1115

<210> 24
 <211> 1077
 <212> PRT
 <213> Mus musculus

<400> 24

Met Ala Gly Pro Gly Ser Leu Cys Cys Ala Ser Arg Gly Ala Ser Ala
 1 5 10 15
 Leu Leu Ala Thr Ala Leu Leu Tyr Ala Ala Leu Gly Asp Val Val Arg
 20 25 30
 Ser Glu Gln Gln Ile Pro Leu Ser Val Val Lys Leu Trp Ala Ser Ala
 35 40 45
 Phe Gly Gly Glu Ile Lys Ser Ile Ala Ala Lys Tyr Ser Gly Ser Gln
 50 55 60
 Leu Leu Gln Lys Lys Tyr Lys Glu Tyr Glu Lys Asp Val Ala Ile Glu
 65 70 75 80
 Glu Ile Asp Gly Leu Gln Leu Val Lys Lys Leu Ala Lys Ile Met Glu
 85 90 95

1801.app

Glu	Met	Phe	His	Lys	Lys	Ser	Glu	Ala	Val	Arg	Arg	Leu	Val	Glu	Ala
			100					105					110		
Ala	Glu	Glu	Ala	His	Leu	Lys	His	Glu	Phe	Asp	Ala	Asp	Leu	Gln	Tyr
		115					120					125			
Glu	Tyr	Phe	Asn	Ala	Val	Leu	Ile	Asn	Glu	Arg	Asp	Lys	Asp	Gly	Asn
	130					135					140				
Phe	Leu	Glu	Leu	Gly	Lys	Glu	Phe	Ile	Leu	Ala	Pro	Asn	Asp	His	Phe
145					150					155					160
Asn	Asn	Leu	Pro	Val	Asn	Ile	Ser	Leu	Ser	Asp	Val	Gln	Val	Pro	Thr
				165					170					175	
Asn	Met	Tyr	Asn	Lys	Asp	Pro	Ala	Ile	Val	Asn	Gly	Val	Tyr	Trp	Ser
			180					185					190		
Glu	Ser	Leu	Asn	Lys	Val	Phe	Val	Asp	Asn	Phe	Asp	Arg	Asp	Pro	Ser
		195					200					205			
Leu	Ile	Trp	Gln	Tyr	Phe	Gly	Ser	Ala	Lys	Gly	Phe	Phe	Arg	Gln	Tyr
	210					215					220				
Pro	Gly	Ile	Lys	Trp	Glu	Pro	Asp	Glu	Asn	Gly	Val	Ile	Ala	Phe	Asp
225					230					235					240
Cys	Arg	Asn	Arg	Lys	Trp	Tyr	Ile	Gln	Ala	Ala	Thr	Ser	Pro	Lys	Asp
				245					250					255	
Val	Val	Ile	Leu	Val	Asp	Val	Ser	Gly	Ser	Met	Lys	Gly	Leu	Arg	Leu
			260					265					270		
Thr	Ile	Ala	Lys	Gln	Thr	Val	Ser	Ser	Ile	Leu	Asp	Thr	Leu	Gly	Asp
		275					280					285			
Asp	Asp	Phe	Phe	Asn	Ile	Ile	Thr	Tyr	Asn	Glu	Glu	Leu	His	Tyr	Val
	290					295					300				
Glu	Pro	Cys	Leu	Asn	Gly	Thr	Leu	Val	Gln	Ala	Asp	Arg	Thr	Asn	Lys
305					310					315					320
Glu	His	Phe	Arg	Glu	His	Leu	Asp	Lys	Leu	Phe	Ala	Lys	Gly	Ile	Gly
				325					330					335	
Met	Leu	Asp	Ile	Ala	Leu	Asn	Glu	Ala	Phe	Asn	Ile	Leu	Ser	Asp	Phe
			340					345					350		
Asn	His	Thr	Gly	Gln	Gly	Ser	Ile	Cys	Ser	Gln	Ala	Ile	Met	Leu	Ile
		355					360					365			
Thr	Asp	Gly	Ala	Val	Asp	Thr	Tyr	Asp	Thr	Ile	Phe	Ala	Lys	Tyr	Asn
	370					375					380				
Trp	Pro	Asp	Arg	Lys	Val	Arg	Ile	Phe	Thr	Tyr	Leu	Ile	Gly	Arg	Glu
385					390					395					400

1801.app

Ala	Ala	Phe	Ala	Asp 405	Asn	Leu	Lys	Trp	Met 410	Ala	Cys	Ala	Asn	Lys 415	Gly
Phe	Phe	Thr	Gln 420	Ile	Ser	Thr	Leu	Ala 425	Asp	Val	Gln	Glu	Asn 430	Val	Met
Glu	Tyr	Leu 435	His	Val	Leu	Ser	Arg 440	Pro	Lys	Val	Ile	Asp 445	Gln	Glu	His
Asp	Val 450	Val	Trp	Thr	Glu	Ala 455	Tyr	Ile	Asp	Ser	Thr	Leu	Pro	Gln	Ala
Gln 465	Lys	Leu	Ala	Asp	Asp 470	Gln	Gly	Leu	Val	Leu 475	Met	Thr	Thr	Val	Ala 480
Met	Pro	Val	Phe	Ser 485	Lys	Gln	Asn	Glu	Thr 490	Arg	Ser	Lys	Gly	Ile 495	Leu
Leu	Gly	Val	Val 500	Gly	Thr	Asp	Val	Pro 505	Val	Lys	Glu	Leu	Leu 510	Lys	Thr
Ile	Pro	Lys 515	Tyr	Lys	Leu	Gly	Ile 520	His	Gly	Tyr	Ala	Phe 525	Ala	Ile	Thr
Asn	Asn 530	Gly	Tyr	Ile	Leu	Thr 535	His	Pro	Glu	Leu	Arg 540	Pro	Leu	Tyr	Glu
Glu 545	Gly	Lys	Lys	Arg	Arg 550	Lys	Pro	Asn	Tyr	Ser 555	Ser	Val	Asp	Leu	Ser 560
Glu	Val	Glu	Trp	Glu 565	Asp	Arg	Asp	Asp	Val 570	Leu	Arg	Asn	Ala	Met 575	Val
Asn	Arg	Lys	Thr 580	Gly	Lys	Phe	Ser	Met 585	Glu	Val	Lys	Lys	Thr 590	Val	Asp
Lys	Gly	Lys 595	Arg	Val	Leu	Val	Met 600	Thr	Asn	Asp	Tyr	Tyr 605	Tyr	Thr	Asp
Ile	Lys 610	Gly	Thr	Pro	Phe	Ser 615	Leu	Gly	Val	Ala	Leu 620	Ser	Arg	Gly	His
Gly 625	Lys	Tyr	Phe	Phe	Arg 630	Gly	Asn	Val	Thr	Ile 635	Glu	Glu	Gly	Leu	His 640
Asp	Leu	Glu	His	Pro 645	Asp	Val	Ser	Leu	Ala 650	Asp	Glu	Trp	Ser	Tyr 655	Cys
Asn	Thr	Asp	Leu 660	His	Pro	Glu	His	Arg 665	His	Leu	Ser	Gln	Leu 670	Glu	Ala
Ile	Lys	Leu 675	Tyr	Leu	Lys	Gly	Lys 680	Glu	Pro	Leu	Leu	Gln 685	Cys	Asp	Lys
Glu	Leu	Ile	Gln	Glu	Val	Leu	Phe	Asp	Ala	Val	Val	Ser	Ala	Pro	Ile

1801.app

690					695					700					
Glu 705	Ala	Tyr	Trp	Thr	Ser 710	Leu	Ala	Leu	Asn	Lys 715	Ser	Glu	Asn	Ser	Asp 720
Lys	Gly	Val	Glu	Val 725	Ala	Phe	Leu	Gly	Thr 730	Arg	Thr	Gly	Leu	Ser 735	Arg
Ile	Asn	Leu	Phe 740	Val	Gly	Ala	Glu	Gln 745	Leu	Thr	Asn	Gln	Asp 750	Phe	Leu
Lys	Ala	Gly 755	Asp	Lys	Glu	Asn	Ile 760	Phe	Asn	Ala	Asp	His 765	Phe	Pro	Leu
Trp	Tyr 770	Arg	Arg	Ala	Ala	Glu 775	Gln	Ile	Ala	Gly	Ser 780	Phe	Val	Tyr	Ser
Ile 785	Pro	Phe	Ser	Thr	Gly 790	Thr	Val	Asn	Lys	Ser 795	Asn	Val	Val	Thr	Ala 800
Ser	Thr	Ser	Ile	Gln 805	Leu	Leu	Asp	Glu	Arg 810	Lys	Ser	Pro	Val	Val 815	Ala
Ala	Val	Gly	Ile 820	Gln	Met	Lys	Leu	Glu 825	Phe	Phe	Gln	Arg	Lys 830	Phe	Trp
Thr	Ala	Ser 835	Arg	Gln	Cys	Ala	Ser 840	Leu	Asp	Gly	Lys	Cys 845	Ser	Ile	Ser
Cys	Asp 850	Asp	Glu	Thr	Val	Asn 855	Cys	Tyr	Leu	Ile	Asp 860	Asn	Asn	Gly	Phe
Ile 865	Leu	Val	Ser	Glu	Asp 870	Tyr	Thr	Gln	Thr	Gly 875	Asp	Phe	Phe	Gly	Glu 880
Val	Glu	Gly	Ala	Val 885	Met	Asn	Lys	Leu	Leu 890	Thr	Met	Gly	Ser	Phe 895	Lys
Arg	Ile	Thr	Leu 900	Tyr	Asp	Tyr	Gln	Ala 905	Met	Cys	Arg	Ala	Asn 910	Lys	Glu
Ser	Ser	Asp 915	Ser	Ala	His	Gly	Leu 920	Leu	Asp	Pro	Tyr	Lys 925	Ala	Phe	Leu
Ser	Ala	Ala	Lys	Trp	Ile	Met 935	Thr	Glu	Leu	Val	Leu 940	Phe	Leu	Val	Glu
Phe 945	Asn	Leu	Cys	Ser	Trp 950	Trp	His	Ser	Asp	Met 955	Thr	Ala	Lys	Ala	Gln 960
Lys	Leu	Lys	Gln	Thr 965	Leu	Glu	Pro	Cys	Asp 970	Thr	Glu	Tyr	Pro	Ala 975	Phe
Val	Ser	Glu	Arg 980	Thr	Ile	Lys	Glu	Thr 985	Thr	Gly	Asn	Ile	Ala 990	Cys	Glu

1801.app

Asp Cys Ser Lys Ser Phe Val Ile Gln Gln Ile Pro Ser Ser Asn Leu
995 1000 1005

Phe Met Val Val Val Asp Ser Ser Cys Leu Cys Glu Ser Val Ala Pro
1010 1015 1020

Ile Thr Met Ala Pro Ile Glu Ile Arg Tyr Asn Glu Ser Leu Lys Cys
1025 1030 1035 1040

Glu Arg Leu Lys Ala Gln Lys Ile Arg Arg Arg Pro Glu Ser Cys His
1045 1050 1055

Gly Phe His Pro Glu Glu Asn Ala Arg Glu Cys Gly Gly Ala Ser His
1060 1065 1070

His His His His His
1075

<210> 25
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 25
tcgccaccat ggcggtgccg gctc
24

<210> 26
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 26
tcggaattcc tcagtgatgg tgatggtgat gggccccgcg gccacagtc
49

<210> 27
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 27
tcgccaccat ggccgggccc ggc

23

<210> 28

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 28

tctcagtgat ggtgatgggtg atgcgatgca cccccacact ctc

43